

Massachusetts Department of Environmental Protection Bureau of Waste Prevention

2 0 0 5 Toxics Use Reporting Appendices



Developed in Collaboration with

Office of Technical Assistance for Toxics Use Reduction

Toxics Use Reduction Institute

Executive Office of Environmental Affairs

Appendix	A	1479	Chemical and fertilizer mining, nec
SIC	SIC CODE DESCRIPTION	1481 1499	Nonmetallic minerals services Miscellaneous nonmetallic
10	Metal Mining		minerals
1011	Iron ores		
1021	Copper ores		
1031	Lead and zinc ores	20	Food and Kindred Products
1041	Gold ores	2011	Meat packing plants
1044	Silver ores	2013	Sausages and other prepared
1061	Ferroalloy ores, except vanadium		meats
1081	Metal mining services	2015	Poultry slaughtering and
1094	Uranium-radium-vanadium ores		processing
1099	Metal Mining	2021	Creamery butter
1077	Wictar Willing	2022	Cheese, natural and processed
·		2023	Dry, condensed, evaporated
10	Cool Mining		products
12	Coal Mining	2024	Ice cream and frozen desserts
1221	Bituminous coal and lignite	2026	Fluid milk
1222	surface	2032	Canned specialties
1222	Bituminous coalunderground	2033	
1231 1241	Anthracite mining Coal mining services	2034	Dehydrated fruits, vegetables,
1241	Coal mining services	2031	soups
		2035	Pickles, sauces, and salad
13	Oil and Extraction Gas		dressings
1311	Crude petroleum and natural gas	2037	Frozen fruits and vegetables
1311	Natural gas liquids	2038	Frozen specialties, nec
1321	Drilling oil and gas wells	2041	Flour and other grain mill
1381			products
1382	Oil and gas exploration services	2043	Cereal breakfast foods
1389	Oil and gas field services, nec	2044	Rice milling
		2045	Prepared flour mixes and doughs
		2046	Wet corn milling
14	Non metallic Minerals, Except	2047	Dog and cat food
	Fuels	2048	Prepared feeds, nec
1411	Dimension stone	2051	Bread, cake, and related products
1422	Crushed and broken limestone	2052	Cookies and crackers
1423	Crushed and broken granite	2052	Frozen bakery products, except
1429	Crushed and broken stone, nec	2033	bread
1442	Construction sand and gravel	2061	
1446	Industrial sand		Raw cane sugar
1455	Kaolin and ball clay	2062	Cane sugar refining
1459	Clay and related minerals, nec	2063	Beet sugar
1474	Potash, soda, and borate minerals	2064	Candy & other confectionery
1475	Phosphate rock	2011	products
	1	2066	Chocolate & cocoa products
		2067	Chewing gum

2068	Salted & roasted nuts & seeds	2269	Finishing plants, nec
2074	Cottonseed oil mills	2273	Carpets and rugs
2075	Soybean oil mills	2281	Yarn spinning mills
2076	Vegetable oil mills, nec	2282	Throwing and winding mills
2077	Animal and marine fats and oils	2284	Thread mills
2079	Edible fats and oils, nec	2295	Coated fabrics, not rubberized
2082	Malt beverages	2296	
2083	Malt	2297	
2084	Wines, brandy, and brandy spirits	2298	Cordage and twine
2085	Distilled and blended liquors	2299	Textile goods, nec
2086	Bottled and canned soft drinks	22))	Textile goods, nee
2087	Flavoring extracts and syrups,		
2007	nec	23	Annarol and Othor Toytilo
2091	Canned and cured fish and	23	Apparel and Other Textile Products
2071	seafoods	2211	
2092	Fresh or frozen prepared fish	2311	Men's & boys' suits & coats
2092	Roasted coffee	2321	Men's & boys' shirts
2093	Potato chips and similar snacks	2322	Men's & boys' underwear &
2090	Manufactured ice	2222	nightwear
2097		2323	Men's & boys' neckwear
	Macaroni and spaghetti	2325	Men's & boys' trousers & slacks
2099	Food preparations, nec	2326	Men's & boys' work clothing
		2329	Men's & boys' clothing, nec
		2331	Women's & misses' blouses &
04	T. I D I I .		
21	Tobacco Products	2225	shirts
2111	Cigarettes	2335	Women's, & misses' dresses
2111 2121	Cigarettes Cigars	2335 2337	Women's, & misses' dresses Women's & misses' suits and
2111 2121 2131	Cigarettes Cigars Chewing and smoking tobacco	2337	Women's, & misses' dresses Women's & misses' suits and coats
2111 2121	Cigarettes Cigars		Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear,
2111 2121 2131	Cigarettes Cigars Chewing and smoking tobacco	23372339	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec
2111 2121 2131	Cigarettes Cigars Chewing and smoking tobacco	2337	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's
2111 2121 2131 2141	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying	233723392341	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear
2111 2121 2131 2141	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products	2337233923412342	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments
2111 2121 2131 2141 22 22 2211	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton	2337 2339 2341 2342 2353	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery
2111 2121 2131 2141	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills,	2337233923412342	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses,
2111 2121 2131 2141 222 2211 2221	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade	2337 2339 2341 2342 2353 2361	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses
2111 2121 2131 2141 2221 2211 2221 2231	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool	2337 2339 2341 2342 2353 2361 2369	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec
2111 2121 2131 2141 2221 2211 2221 2231 2241	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills	2337 2339 2341 2342 2353 2361 2369 2371	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods
2111 2121 2131 2141 2241 2221 2231 2241 2251	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks	2337 2339 2341 2342 2353 2361 2369 2371 2381	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves
2111 2121 2131 2141 2221 2211 2221 2231 2241 2251 2252	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks Hosiery, nec	2337 2339 2341 2342 2353 2361 2369 2371 2381 2384	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves Robes and dressing gowns
2111 2121 2131 2141 2241 2221 2231 2241 2251 2252 2253	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks Hosiery, nec Knit outerwear mills	2337 2339 2341 2342 2353 2361 2369 2371 2381 2384 2385	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves Robes and dressing gowns Waterproof outerwear
2111 2121 2131 2141 2241 2221 2231 2241 2251 2252 2253 2254	Cigarettes Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks Hosiery, nec Knit outerwear mills Knit underwear mills	2337 2339 2341 2342 2353 2361 2369 2371 2381 2384 2385 2386	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves Robes and dressing gowns Waterproof outerwear Leather and sheep-lined clothing
2111 2121 2131 2141 2241 2221 2231 2241 2251 2252 2253 2254 2257	Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks Hosiery, nec Knit outerwear mills Knit underwear mills Weft knit fabric mills	2337 2339 2341 2342 2353 2361 2369 2371 2381 2384 2385 2386 2387	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves Robes and dressing gowns Waterproof outerwear Leather and sheep-lined clothing Apparel belts
2111 2121 2131 2141 2241 2221 2231 2241 2251 2252 2253 2254 2257 2258	Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks Hosiery, nec Knit outerwear mills Knit underwear mills Weft knit fabric mills Lace and warp knit fabric mills	2337 2339 2341 2342 2353 2361 2369 2371 2381 2384 2385 2386 2387 2389	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves Robes and dressing gowns Waterproof outerwear Leather and sheep-lined clothing Apparel belts Apparel and accessories, nec
2111 2121 2131 2141 2141 2221 2221 2231 2241 2251 2252 2253 2254 2257 2258 2259	Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks Hosiery, nec Knit outerwear mills Knit underwear mills Weft knit fabric mills Lace and warp knit fabric mills Knitting mills, nec	2337 2339 2341 2342 2353 2361 2369 2371 2381 2384 2385 2386 2387 2389 2391	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves Robes and dressing gowns Waterproof outerwear Leather and sheep-lined clothing Apparel belts Apparel and accessories, nec Curtains and draperies
2111 2121 2131 2141 2241 2221 2231 2241 2251 2252 2253 2254 2257 2258	Cigars Chewing and smoking tobacco Tobacco stemming and redrying Textile Mill Products Broadwoven fabric mills, cotton Broadwoven fabric mills, manmade Broadwoven fabric mills, wool Narrow fabric mills Women's hosiery, except socks Hosiery, nec Knit outerwear mills Knit underwear mills Weft knit fabric mills Lace and warp knit fabric mills	2337 2339 2341 2342 2353 2361 2369 2371 2381 2384 2385 2386 2387 2389	Women's, & misses' dresses Women's & misses' suits and coats Women's & misses' outerwear, nec Women's and children's underwear Bras, girdles, and allied garments Hats, caps, and millinery Girls' & children's dresses, blouses Girls' & children's outerwear, nec Fur goods Fabric dress and work gloves Robes and dressing gowns Waterproof outerwear Leather and sheep-lined clothing Apparel belts Apparel and accessories, nec

2394 2395	Canvas and related products Pleating and stitching	2599	Furniture and fixtures, nec
2396	Automotive and apparel		
	trimmings	26	Paper and Allied Products
2397	Schiffli machine embroideries	2611	Pulp mills
2399	Fabricated textile products, nec	2621	Paper mills
		2631	Paperboard mills
		2652	Setup paperboard boxes
24	Lumber and Wood Products	2653	Corrugated & solid fiber boxes
2411	Logging	2655	Fiber cans, drums & similar
2421	Sawmills & planing mills,		products
	general	2656	Sanitary food containers
2426	Hardwood dimension & flooring	2657	Folding paperboard boxes
	mills	2671	Paper coated & laminated,
2429	Special product sawmills, nec		packaging
2431	Millwork	2672	Paper coated & laminated, nec
2434	Wood kitchen cabinets	2673	Bags: plastics, laminated, &
2435	Hardwood veneer and plywood		coated
2436	Softwood veneer and plywood	2674	Bags: uncoated paper &
2439	Structural wood members, nec		multiwall
2441	Nailed wood boxes and shook	2675	Die-cut paper & board
2448	Wood pallets and skids	2676	Sanitary paper products
2449	Wood containers, nec	2677	Envelopes
2451	Mobile homes	2678	Stationery products
2452	Prefabricated wood buildings	2679	Converted paper products, nec
2491	Wood preserving		roper products, see
2493	Reconstituted wood products		
2499	Wood products, nec	27	Printing and Publishing
	1	2711	Newspapers
		2721	Periodicals
25	Furniture and Fixtures	2731	Book publishing
2511	Wood household furniture	2732	Book printing
2512	Upholstered household furniture	2741	Miscellaneous publishing
2514	Metal household furniture	2752	Commercial printing,
2515	Mattresses and bedsprings	2732	lithographic
2517	Wood TV and radio cabinets	2754	Commercial printing, gravure
2519	Household furniture, nec	2759	Commercial printing, nec
2521	Wood office furniture	2761	Manifold business forms
2522	Office furniture, except wood	2771	Greeting cards
2531	Public building & related	2782	Blankbooks and looseleaf
2331	furniture	2702	binders
2541		2789	
2542	Wood partitions and fixtures Partitions and fixtures, except	2791	Bookbinding and related work Typesetting
<i>4344</i>	wood	2791	Platemaking services
2591		2190	i iaicilianilig scivices
<i>437</i> 1	Drapery hardware, blinds and shades	· 	

28	Chemicals and Allied Products	3021	Rubber and plastics footwear
2812	Alkalies and chlorine	3052	Rubber & plastics hose & belting
2813	Industrial gases	3053	Gaskets, packing & sealing
2816	Inorganic pigments		devices
2819	Industrial inorganic chemicals,	3061	Mechanical rubber goods
	nec	3069	Fabricated rubber products, nec
2821	Plastics materials and resins	3081	Unsupported plastics film &
2822	Synthetic rubber		sheet
2823	Cellulosic manmade fibers	3082	Unsupported plastics profile
2824	Organic fibers, noncellulosic		shapes
2833	Medicinals and botanicals	3083	Laminated plastics plate & sheet
2834	Pharmaceutical preparations	3084	Plastics pipe
2835	Diagnostic substances	3085	Plastics bottles
2836	Biological products exc.	3086	Plastics foam products
	diagnostic	3087	Custom compound purchased
2841	Soap and other detergents		resins
2842	Polishes and sanitation goods	3088	Plastics plumbing fixtures
2843	Surface active agents	3089	Plastics products, nec
2844	Toilet preparations		
2851	Paints and allied products		
2861	Gum and wood chemicals	31	Leather and Leather Products
2865	Cyclic crudes and intermediates	3111	Leather tanning and finishing
2869	Industrial organic chemicals, nec	3131	Footwear cut stock
2873	Nitrogenous fertilizers	3142	House slippers
2874	Phosphatic fertilizers	3143	Men's footwear, except athletic
2875	Fertilizers, mixing only	3144	Women's footwear, except
2879	Agricultural chemicals, nec		athletic
2891	Adhesives and sealants	3149	Footwear, except rubber, nec
2892	Explosives	3151	Leather gloves and mittens
2893	Printing ink	3161	Luggage
2895	Carbon black	3171	Women's handbags and purses
2899	Chemical preparations, nec	3172	Personal leather goods, nec
		3199	Leather goods, nec
••		-	
29	Petroleum and Coal Products	20	Charre Oleve and Oleve
2911	Petroleum refining	32	Stone, Clay, and Glass
2951	Asphalt paving mixtures and		Products
20.52	blocks	3211	Flat glass
2952	Asphalt felts and coatings	3221	Glass containers
2992	Lubricating oils and greases	3229	Pressed and blown glass, nec
2999	Petroleum and coal products, nec	3231	Products of purchased glass
		3241	Cement, hydraulic
		3251	Brick and structural clay tile
30	Rubber and Misc. Plastics	3253	Ceramic wall and floor tile
	Products	3255	Clay refractories
3011	Tires and inner tubes	3259	Structural clay products, nec

3261	Vitreous plumbing fixtures	3364	Nonferrous die-casting exc.
3262	Vitreous china table &		aluminum
	kitchenware	3365	Aluminum foundries
3263	Semivitreous table &	3366	Copper foundries
	kitchenware	3369	Nonferrous foundries, nec
3264	Porcelain electrical supplies	3398	Metal heat treating
3269	Pottery products, nec	3399	Primary metal products, nec
3271	Concrete block and brick		
3272	Concrete products, nec		
3273	Ready-mixed concrete	34	Fabricated Metal Products
3274	Lime	3411	Metal cans
3275	Gypsum products	3412	Metal barrels, drums, and pails
3281	Cut stone and stone products	3421	Cutlery
3291	Abrasive products	3423	Hand and edge tools, nec
3292	Asbestos products	3425	Saw blades and handsaws
3295	Minerals, ground or treated	3429	Hardware, nec
3296	Mineral wool	3431	Metal sanitary ware
3297	Nonclay refractories	3432	Plumbing fixture fittings and trim
3299	Nonmetallic mineral products,	3433	Heating equipment, except
	nec		electric
		3441	Fabricated structural metal
		3442	Metal doors, sash, and trim
33	Primary Metal Industries	3443	Fabricated plate work (boiler
3312	Blast furnaces and steel mills		shops)
3313	Electrometallurgical products	3444	Sheet metalwork
3315	Steel wire and related products	3446	Architectural metal work
3316	Cold finishing of steel shapes	3448	Prefabricated metal buildings
3317	Steel pipe and tubes	3449	Miscellaneous metal work
3321	Gray and ductile iron foundries	3451	Screw machine products
3322	Malleable iron foundries	3452	Bolts, nuts, rivets, and washers
3324	Steel investment foundries	3462	Iron and steel forgings
3325	Steel foundries, nec	3463	Nonferrous forgings
3331	Primary copper	3465	Automotive stampings
3334	Primary aluminum	3466	Crowns and closures
3339	Primary nonferrous metals, nec	3469	Metal stampings, nec
3341	Secondary nonferrous metals	3471	Plating and polishing
3351	Copper rolling & drawing	3479	Metal coating and allied services
3353	Aluminum sheet, plate, and foil	3482	Small arms ammunition
3354	Aluminum extruded products	3483	Ammunition, exc. for small
3355	Aluminum rolling & drawing,	0.00	arms, nec
	nec	3484	Small arms
3356	Nonferrous rolling & drawing,	3489	Ordnance and accessories, nec
	nec	3491	Industrial valves
3357	Nonferrous wiredrawing &	3492	Fluid power valves & hose
	insulating	, _	fittings
3363	Aluminum die-castings	3493	Steel springs, except wire

3494	Valves & pipe fittings, nec	3566	Speed changers, drives, and gears
3495	Wire springs	3567	Industrial furnaces and ovens
3496	Misc. fabricated wire products	3568	Power transmission equipment,
3497	Metal foil & leaf		nec
3498	Fabricated pipe & fittings	3569	General industrial machinery,
3499	Fabricated metal products, nec		nec
0.,,	r werrewood income produces, inco	3571	Electronic computers
	_	3572	Computer storage devices
35	Industrial Machinery and	3575	Computer terminals
33	Equipment	3577	Computer peripheral equipment,
3511		3311	nec
3311	Turbines and turbine generator	3578	Calculating and accounting
2510	sets	3370	equipment
3519	Internal combustion engines, nec	3579	Office machines, nec
3523	Farm machinery and equipment	3581	Automatic vending machines
3524	Lawn and garden equipment	3582	Commercial laundry equipment
3531	Construction machinery	3582	• • •
3532	Mining machinery	3363	Refrigeration and heating
3533	Oil and gas field machinery	2506	equipment
3534	Elevators and moving stairways	3586	Measuring and dispensing pumps
3535	Conveyors and conveying	3589	Service industry machinery, nec
	equipment	3592	Carburetors, pistons, rings,
3536	Hoists, cranes, and monorails	2502	valves
3537	Industrial trucks and tractors	3593	Fluid power cylinders &
3541	Machine tools, metal cutting	2504	actuators
	types	3594	Fluid power pumps & motors
3542	Machine tools, metal forming	3596	Scales and balances, exc.
	types	2700	laboratory
3543	Industrial patterns	3599	Industrial machinery, nec
3544	Special dies, tools, jigs &		
	fixtures		
3545	Machine tool accessories	36	Electronic & Other Electric
3546	Power-driven handtools		Equipment
3547	Rolling mill machinery	3612	Transformers, except electronic
3548	Welding apparatus	3613	Switchgear and switchboard
3549	Metalworking machinery, nec		apparatus
3552	Textile machinery	3621	Motors and generators
3553	Woodworking machinery	3624	Carbon and graphite products
3554	Paper industries machinery	3625	Relays and industrial controls
3555	Printing trades machinery	3629	Electrical industrial apparatus,
3556	Food products machinery		nec
3559	Special industry machinery, nec	3631	Household cooking equipment
3561	Pumps and pumping equipment	3632	Household refrigerators and
3562	Ball and roller bearings		freezers
3563	Air and gas compressors	3633	Household laundry equipment
3564	Blowers and fans	3634	Electric housewares and fans
3565	Packaging machinery	3635	Household vacuum cleaners
5505	i ackazing macimici y	1 3033	riousenoia vacaum cicaners

3639	Household appliances, nec	3732	Boat building and repairing
3641	Electric lamps	3743	Railroad equipment
3643	Current-carrying wiring devices	3751	Motorcycles, bicycles, and parts
3644	Noncurrent-carrying wiring devices	3761	Guided missiles and space vehicles
3645	Residential lighting fixtures	3764	Space propulsion units and parts
3646	Commercial lighting fixtures	3769	Space vehicle equipment, nec
3647	Vehicular lighting equipment	3792	Travel trailers and campers
3648	Lighting equipment, nec	3795	Tanks and tank components
3651	Household audio and video	3799	Transportation equipment, nec
3031	equipment	3177	Transportation equipment, nee
3652	Prerecorded records and tapes	-	
3661	Telephone and telegraph	38	Instruments and Related
3001	apparatus	30	Products
3663	Radio & TV communications	3812	
3003	equipment		Search and navigation equipment
3669	Communications equipment, nec	3821	Laboratory apparatus and furniture
3671	Electron tubes	2922	
3672	Printed circuit boards	3822	Environmental controls
3674	Semiconductors and related	3823	Process control instruments
3074	devices	3824	Fluid meters and counting
3675	Electronic capacitors	2025	devices
3676	Electronic capacitors Electronic resistors	3825	Instruments to measure
3677	Electronic resistors Electronic coils and transformers	2026	electricity
3678	Electronic connectors	3826	Analytical instruments
3679		3827	Optical instruments and lenses
3691	Electronic components, nec Storage batteries	3829	Measuring & controlling devices,
3692	Primary batteries, dry and wet	2041	nec
3694	Engine electrical equipment	3841	Surgical and medical instruments
3695	Magnetic and optical recording	3842	Surgical appliances and supplies
3093	media	3843	Dental equipment and supplies
3699	Electrical equipment & supplies,	3844	X-ray apparatus and tubes
3099	nec supplies,	3845	Electromedical equipment
	nec	3851	Ophthalmic goods
		3861	Photographic equipment and
27	Transportation Fauinment	2072	supplies
37 3711	Transportation Equipment Motor vehicles and car bodies	3873	Watches, clocks, watchcases &
			parts
3713	Truck and bus bodies		
3714	Motor vehicle parts and accessories		
2715	Truck trailers	39	Miscellaneous
3715			Manufacturing Industries
3716	Motor homes	3911	Jewelry, precious metal
3721	Aircraft	3914	Silverware and plated ware
3724	Aircraft engines and engine parts	3915	Jewelers' materials & lapidary
3728	Aircraft parts and equipment, nec	_	work
3731	Ship building and repairing	3931	Musical instruments

3942	Dolls and stuffed toys	4581	Airports, flying fields, & services
3944	Games, toys, and children's vehicles		
3949	Sporting and athletic goods, nec	46	Pipelines, Except Natural
3951	Pens and mechanical pencils		Gas
3952	Lead pencils and art goods	4612	Crude petroleum pipelines
3953	Marking devices	4613	Refined petroleum pipelines
3955	Carbon paper and inked ribbons	4619	Pipelines, nec
3961	Costume jewelry		1 ,
3965	Fasteners, buttons, needles, &		
	pins	47	Transportation Services
3991	Brooms and brushes	4724	Travel agencies
3993	Signs and advertising specialities	4725	Tour operators
3995	Burial caskets	4729	Passenger transport arrangement,
3996	Hard surface floor coverings, nec		nec
3999	Manufacturing industries, nec	4731	Freight transportation
			arrangement
		4741	Rental of railroad cars
40	Railroad Transportation	4783	Packing and crating
4011	Railroads, line-haul operating	4785	Inspection & fixed facilities
4013	Switching and terminal services	4789	Transportation services, nec
		-	
44	Water Transportation	48	Communication
4412	Deep sea foreign trans. of freight	4812	Radiotelephone communications
7714	Deep sea foreign trails. Of freight	4012	
4424			
	Deep sea domestic trans. of freight	4813	Telephone communications, exc. radio
	Deep sea domestic trans. of		Telephone communications, exc. radio
4424	Deep sea domestic trans. of freight	4813	Telephone communications, exc.
44244432	Deep sea domestic trans. of freight Freight trans. on the Great Lakes	4813	Telephone communications, exc. radio Telegraph & other communications
44244432	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight,	4813 4822	Telephone communications, exc. radio Telegraph & other
4424 4432 4449 4481	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry	4813 4822 4832	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations
4424 4432 4449 4481 4482	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex.	4813 4822 4832 4833	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations
4424 4432 4449 4481	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation,	4813 4822 4832 4833 4841	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services
4424 4432 4449 4481 4482 4489	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec	4813 4822 4832 4833 4841 4899	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec
4424 4432 4449 4481 4482 4489 4491	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling	4813 4822 4832 4833 4841	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services
4424 4432 4449 4481 4482 4489 4491 4492	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service	4813 4822 4832 4833 4841 4899	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services
4424 4432 4449 4481 4482 4489 4491 4492 4493	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas	4813 4822 4832 4833 4841 4899 49	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services
4424 4432 4449 4481 4482 4489 4491 4492	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas Water transportation services,	4813 4822 4832 4833 4841 4899 49 4911 4922	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services Natural gas transmission
4424 4432 4449 4481 4482 4489 4491 4492 4493	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas	4813 4822 4832 4833 4841 4899 49 4911 4922 4923	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services Natural gas transmission Gas transmission and distribution
4424 4432 4449 4481 4482 4489 4491 4492 4493	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas Water transportation services,	4813 4822 4832 4833 4841 4899 49 4911 4922 4923 4924	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services Natural gas transmission Gas transmission and distribution Natural gas distribution
4424 4432 4449 4481 4482 4489 4491 4492 4493 4499	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas Water transportation services, nec	4813 4822 4832 4833 4841 4899 49 4911 4922 4923	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services Natural gas transmission Gas transmission and distribution Natural gas distribution Gas production and/or
4424 4432 4449 4481 4482 4489 4491 4492 4493 4499	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas Water transportation services, nec Transportation By Air	4813 4822 4832 4833 4841 4899 49 4911 4922 4923 4924 4925	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services Natural gas transmission Gas transmission and distribution Natural gas distribution Gas production and/or distribution
4424 4432 4449 4481 4482 4489 4491 4492 4493 4499 45 4512	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas Water transportation services, nec Transportation By Air Air transportation, scheduled	4813 4822 4832 4833 4841 4899 49 4911 4922 4923 4924	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services Natural gas transmission Gas transmission and distribution Natural gas distribution Gas production and/or distribution Electric and other services
4424 4432 4449 4481 4482 4489 4491 4492 4493 4499	Deep sea domestic trans. of freight Freight trans. on the Great Lakes Water transportation of freight, nec Deep sea passenger trans., ex. ferry Ferries Water passenger transportation, nec Marine cargo handling Towing and tugboat service Marinas Water transportation services, nec Transportation By Air	4813 4822 4832 4833 4841 4899 49 4911 4922 4923 4924 4925	Telephone communications, exc. radio Telegraph & other communications Radio broadcasting stations Television broadcasting stations Cable and other pay TV services Communication services, nec Electric, Gas, and Sanitary Services Electric services Natural gas transmission Gas transmission and distribution Natural gas distribution Gas production and/or distribution

4939	Combination utilities, nec	5078	Refrigeration equipment and
4941	Water supply		supplies
4952	Sewerage systems	5082	Construction and mining
4953	Refuse systems		machinery
4959	Sanitary services, nec	5083	Farm and garden machinery
4961	Steam and air-conditioning	5084	Industrial machinery and
	supply		equipment
4971	Irrigation systems	5085	Industrial supplies
		5087	Service establishment equipment
		5088	Transportation equipment &
50	Wholesale TradeDurable		supplies
	Goods	5091	Sporting & recreational goods
5012	Automobiles and other motor	5092	Toys and hobby goods and
	vehicles		supplies
5013	Motor vehicle supplies and new	5093	Scrap and waste materials
	parts	5094	Jewelry & precious stones
5014	Tires and tubes	5099	Durable goods, nec
5015	Motor vehicle parts, used		
5021	Furniture		
5023	Homefurnishings	51	Wholesale Trade
5031	Lumber, plywood, and millwork		Nondurable Goods
5032	Brick, stone, & related materials	5111	Printing and writing paper
5033	Roofing, siding, & insulation	5112	Stationery and office supplies
5039	Construction materials, nec	5113	Industrial & personal service
5043	Photographic equipment and		paper
	supplies	5122	Drugs, proprietaries, and
5044	Office equipment		sundries
5045	Computers, peripherals &	5131	Piece goods & notions
	software	5136	Men's and boys' clothing
5046	Commercial equipment, nec	5137	Women's and children's clothing
5047	Medical and hospital equipment	5139	Footwear
5048	Ophthalmic goods	5141	Groceries, general line
5049	Professional equipment, nec	5142	Packaged frozen foods
5051	Metals service centers and	5143	Dairy products, exc. dried or
	offices		canned
5052	Coal and other minerals and ores	5144	Poultry and poultry products
5063	Electrical apparatus and	5145	Confectionery
	equipment	5146	Fish and seafoods
5064	Electrical appliances, TV &	5147	Meats and meat products
	radios	5148	Fresh fruits and vegetables
5065	Electronic parts and equipment	5149	Groceries and related products,
5072		1	200
	Hardware		nec
5074	Plumbing & hydronic heating	5153	Grain and field beans
	Plumbing & hydronic heating supplies	5154	Grain and field beans Livestock
5074	Plumbing & hydronic heating		Grain and field beans Livestock Farm-product raw materials, nec

5169	Chemicals & allied products, nec	7331	Direct mail advertising services
5171	Petroleum bulk stations & terminals	7334	Photocopying & duplicating services
5172	Petroleum products, nec	7335	Commercial photography
5172	Beer and ale	7336	Commercial art and graphic
5182	Wine and distilled beverages	7550	design
5191	Farm supplies	7338	Secretarial & court reporting
5192	Books, periodicals, &	7342	Disinfecting & pest control
3172	newspapers	7572	services
5193	Flowers & florists' supplies	7349	Building maintenance services,
5194	Tobacco and tobacco products	7547	nec
5198	Paints, varnishes, and supplies	7352	Medical equipment rental
5199	Nondurable goods, nec	7353	Heavy construction equipment
3177	Trondurable goods, nee	7333	rental
		7359	Equipment rental & leasing, nec
72	Personal Services	7361	Employment agencies
7211	Power laundries, family &	7363	Help supply services
	commercial	7371	Computer programming services
7212	Garment pressing & cleaners'	7372	Prepackaged software
	agents	7373	Computer integrated systems
7213	Linen supply		design
7215	Coin-operated laundries and	7374	Data processing and preparation
	cleaning	7375	Information retrieval services
7216	Drycleaning plants, except rug	7376	Computer facilities management
7217	Carpet and upholstery cleaning	7377	Computer rental & leasing
7218	Industrial launderers	7378	Computer maintenance & repair
7219	Laundry and garment services,	7379	Computer related services, nec
	nec	7381	Detective & armored car services
7221	Photographic studios, portrait	7382	Security systems services
7231	Beauty shops	7383	News syndicates
7241	Barber shops	7384	Photofinishing laboratories
7251	Shoe repair and shoeshine parlors	7389	Business services, nec
7261	Funeral service and crematories		
7291	Tax return preparation services		
7299	Miscellaneous personal services,	75	Auto Repair, Services, and
	nec		Parking
		7513	Truck rental and leasing, no
	-		drivers
73	Business Services	7514	Passenger car rental
7311	Advertising agencies	7515	Passenger car leasing
7312	Outdoor advertising services	7519	Utility trailer rental
7313	Radio, TV, publisher	7521	Automobile parking
	representatives	7532	Top & body repair & paint shops
7319	Advertising, nec	7533	Auto exhaust system repair shops
7322	Adjustment & collection services	7534	Tire retreading and repair shops
7323	Credit reporting services		

7536	Automotive glass replacement shops
7537	Automotive transmission repair shops
7538	General automotive repair shops
7539	Automotive repair shops, nec
7542	Carwashes
7549	Automotive services, nec
76	Miscellaneous Repair Services
76 7622	Miscellaneous Repair Services Radio and television repair
. •	•
7622	Radio and television repair
7622 7623	Radio and television repair Refrigeration service and repair
7622 7623 7629	Radio and television repair Refrigeration service and repair Electrical repair shops, nec

7694 Armature rewinding shops

7699 Repair services, nec

Updated October 22, 1996

Downloaded from the US Department of the Treasury's WEB Page:

http://www.ustreas.gov/treasury/bureaus/sba/siccodes.html

Only SIC Codes that are TURA Reportable are listed.

Appendix B

WHAT TOXIC SUBSTANCES ARE SUBJECT TO TURA REPORTING?

All of the substances listed under Section 313 of EPCRA, and all of the substances that are on the federal Superfund (CERCLA) list of chemicals are reportable under TURA, except for those chemicals that have been delisted by the Administrative Council on Toxics Use Reduction. The list of TURA chemicals subject to reporting for reports due July 1, 2005 is located at the end of this Appendix. (The column entitled "ADD" refers to the year in which the chemical was added to the TURA list.) They include:

- □ EPCRA 313 and CERCLA chemicals and chemical categories sorted by chemical name
- □ EPCRA 313 and CERCLA chemicals and chemical categories sorted by CAS number

The following chemicals have been delisted from TURA (but in certain cases are reportable under EPCRA):

Reporting Year/Chemical Delisted	Reason/Note
1994	
Barium Sulfate	EPCRA delisting and not CERCLA reportable
All copper phthalocyanine compounds that are substituted with only hydrogen and/or chlorine and/or bromine (delisted from the copper compounds category)	EPCRA delisting and not CERCLA reportable
High molecular weight glycol ethers	EPCRA delisting and not CERCLA reportable
1995	•
Certain Metal Alloys (refer to Appendix F) Chromium (III) Oxide from chromium compounds category Ammonium Sulfate Solution (CAS#7783-20-2) Ammonium Nitrate Solution (CAS#6484-52-2)	TURA Administrative Council delisting TURA Administrative Council delisting EPCRA delisting and not CERCLA reportable EPCRA delisting and not CERCLA reportable
Hydroquinone (except for the manufacture of the chemical) Acetic Acid at concentrations of 12% or less Di-(2-ethylhexyDadipate (DEHA) (CAS#103-23-1)	TURA Administrative Council delisting TURA Administrative Council delisting EPCRA delisting and not CERCLA reportable

1997	
Zinc Oxide from zinc compounds	TURA Administrative Council
category	delisting
Radionuclides	TURA Administrative Council
	delisting
2-bromo-2-nitropropane (Bronopol)	EPCRA delisting and not CERCLA
(CAS#52-51-7)	reportable
2, 6 dimethylphenol (CAS# 576-26-	EPCRA delisting and not CERCLA
1)	reportable
Carbamate waste category	CERCLA delisting and not EPCRA
	reportable
1998	•
Silver-Copper Alloy	TURA Administrative Council
	delisting
1999	
Pure Copper and Pure Silver	TURA Administrative Council
	delisting
Caprolactum	CERCLA delisting and not EPCRA
1	reportable
2000	•
Zinc Stearate from zinc compounds	TURA Administrative Council
category	delisting

1. Difference Between TRI and TURA Reporting of Hydrochloric Acid and Sulfuric Acid

- A qualifier was added to hydrochloric acid (CAS No. 7647-01-0) on the EPCRA list that relieves reporting for non-aerosol forms, effective reporting year 1996. A similar qualifier was added for sulfuric acid (CAS No. 7664-93-9) effective reporting year 1995. Reporting only is required for acid aerosols including mists, gas, vapors, fog, and other airborne forms of any particle size. This qualifier is only applicable to EPCRA Form R submissions.
- □ Since this chemical also is on the CERCLA list, all forms (both aerosol and non-aerosol) are reportable under TURA. A "State-Only" Form R must be submitted with the Form S for these acids, as well as the Form R submitted to EPA for only acid aerosols.
- □ For additional assistance on calculating and reporting sulfuric acid, please refer to the following EPA document: <u>Sulfuric Acid</u>: EPA-745-R-97-007 (11/97) Guidance for Reporting Sulfuric Acid (acid aerosols including mists, vapors, gas, fog and other forms of any particle size). This document is available from the EPA EPCRA Hotline 1-800-535-0202 and can be downloaded off the EPA TRI home page at http://www.epa.gov/tri/guide_docs/1998/sulfuric.pdf.

2. Rules For Reporting Certain Chemical Categories

Rules for Reporting Water Dissociable Nitrate Compounds Category

The 1996 EPA TRI guidance document, "List of Toxic Chemicals within the Water Dissociable Nitrate Compounds Category and Guidance for Reporting" (EPA 745-R-96-004), provides a detailed description of how to report this chemical category. The following general overview is from the guidance document:

"Chemicals within the nitrate compounds category are only reportable when in aqueous solution. All water dissociable nitrate compounds are included in the nitrate compounds category, including ammonium nitrate. Specifically listed section 313 chemicals *are not* included in threshold determinations for chemical categories such as the water dissociable nitrate compounds category. Specifically listed toxic chemicals are subject to their own individual threshold determinations. As of December 1, 1994, ammonium nitrate (solution) is not an individually listed chemical on the EPCRA section 313 list. However, ammonium nitrate is still subject to reporting under the nitrate compounds category. In addition, the aqueous ammonia from the dissociation of ammonium nitrate when in aqueous solution is subject to reporting under the ammonia listing."

The following is an example from the TRI guidance document:

✓ Example

In a calendar year, a facility manufactures as byproducts, 20,000 pounds of sodium nitrate and 10,000 pounds of calcium nitrate, both in aqueous solutions, and releases these solutions to wastewater streams. The total quantity of nitrate compounds manufactured by the facility is the sum of the two chemicals, or 30,000 pounds, which exceeds the manufacturing threshold quantity of 25,000 pounds. The facility therefore is required to report for the nitrate compounds category.

There are three diisocyanates that are reported individually under EPCRA, and <u>not</u> as the diisocyanate chemical category:

- Toluene-2,4-diisocyanate (584-84-9)
- Toluene-2,6-diisocyanate (91-08-7)
- Toluene diisocyanate (mixed isomers) (26471-62-5)

Rules for Reporting Glycol Ethers

There are separate categories for glycol ethers defined under EPCRA and CERCLA.

(Please refer to the TRI guidance document, "List of Toxic Chemicals within the Glycol Ethers Category and Guidance for Reporting," EPA 745-R-95-006.)



EPCRA: Glycol Ethers are reportable as the glycol ethers category, N230. The specific chemical formula which defines the EPCRA glycol ethers category is as follows:

 $R - (OCH_2CH_2)_n - OR'$

where

n = 1, 2, or 3;

R = Alkyl C7 or less, or phenyl or alkyl substituted phenyl;

R' = H or alkyl C7 or less, or

OR' consisting of a carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.



CERCLA: Glycol Ethers are reportable under CERLA as defined by the following chemical formula:

Includes mono and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-OR' where:

-n=1, 2, or 3.

-R= alkyl or aryl groups.

-R'= R, H, or groups which, when removed, yield glycol ethers with the structure: $R-(OCH_2CH_2)_n$ -OH. Polymers are excluded from the glycol category.

Any glycol ether that meets the CERCLA definition only is reportable if it is specifically named on the TURA list. If a glycol ether meets <u>both</u> the EPCRA and the CERCLA definitions, it is reportable under the EPCRA category (N230).

Rules For Reporting Specifically Listed Chemicals vs. Chemical Categories

Rules for Reporting the Use of Ammonia and Ammonium Hydroxide under TURA

To further clarify the reporting of ammonia and ammonium hydroxide under TURA, MassDEP recommends that reporting be consistent with EPCRA. Thus, there will not be a "state only" Form R required for ammonium hydroxide, and TURA filers should not file a Form S for ammonium hydroxide (CAS# 1336-21-6). Only one fee will be required to the state for the reporting of ammonia as ammonium hydroxide. MassDEP interprets ammonium hydroxide to be equivalent to aqueous ammonia (as does EPCRA), and 10% of aqueous ammonia (CAS# 7664-41-7) is reportable under TURA, effective reporting year 2000. Please refer to the EPCRA Section 313 Guidance for Reporting Aqueous Ammonia, Revised December 2000, EPA 745-R-00-005.

The following is quoted from #451, <u>EPCRA Section 313 Questions and Answers</u>, December 1998, EPA 745-B-98-004:

"... The chemical ammonium hydroxide (NH₄OH) is a misnomer. It is a common name used to describe a solution of ammonia in water (<u>i.e.</u>, aqueous ammonia), typically a concentrated solution of 28 to 30 percent ammonia. EPA has consistently responded to questions regarding the reportability of these purported ammonium hydroxide solutions under the EPCRA Section 313 ammonia listing by stating that these are 28 to 30 percent solutions of ammonia in water and that the solutions are reportable under EPCRA Section 313 ammonia listing. For a more detailed discussion, see page 34175 of the <u>Federal Register</u> final rule of June 30, 1995 (60 <u>FR</u> 34172).

Facilities should use the percent total ammonia specified on the label of ammonium hydroxide solutions they purchase to determine the total ammonia content in these solutions. Ammonium hydroxide has the chemical formula NH₄OH; however, as mentioned above, strong evidence indicates that the species NH₄OH does not exist. Bottles of concentrated aqueous ammonia purchased from chemical supply companies are almost always labeled ammonium hydroxide. These solutions primarily consist of molecules of NH₃ dissolved in water (along with small amounts of ionized ammonia) . . "

Please note that different chemical suppliers will reference the % of ammonia in different ways. Therefore, it is recommended that facilities contact their chemical suppliers to specify the amount of ammonia per gallon. This question could be specified in "percent by weight per gallon" or in "number of pounds per gallon" of solution, for example.

✓ Examples

Example 1:

Facility otherwise uses 1,000,000 pounds of 30% solution by weight of ammonium hydroxide (30% ammonia by weight).

1,000,000 pounds x 0.30 = 300,000 pounds of ammonia

Only 10% of ammonia is reportable on Form R per EPA <u>Guidance for Reporting</u> Aqueous Ammonia

 $300,000 \times 0.10 = 30,000$ pounds of ammonia

This facility would complete one Form S and one Form R for 30,000 pounds of reportable ammonia (see EPCRA Guidance for Reporting Aqueous Ammonia).

✓ Examples

Example 2:

54,231 gallons of aqueous ammonia (19.0%)

54,231 gallons x 8.34 pounds/gallon x 0.935 specific gravity

= 422,888 pounds aqueous ammonia x 19.0%

80,349 pounds ammonia x 10% reportable ammonia = 8,035 pounds

ammonia

This facility does not meet TURA or TRI reporting thresholds.

The table below summarizes how to report chemicals that are specifically listed and/or listed as chemical categories. Descriptions of specific reporting requirements for each row follow the table.

Row No.	EPCRA Specific Chemical	EPCRA Category	CERCLA Specific Chemical	CERCLA Category	Report as:
1	yes	yes			EPCRA Specific Chemical
2	yes			yes	EPCRA Specific Chemical
3		yes	yes		EPCRA Category
4			yes	yes	CERCLA Specific Chemical
5		yes			EPCRA Category
6		yes		yes	EPCRA Category
7				yes	Do Not Report *

Rows 1 & 2:

If a specific chemical is named on EPCRA and it also is reportable under either an EPCRA or CERCLA listed category, it should be reported **only as a specific EPCRA chemical, not under the category.**

✓ Example

Hydrogen Cyanide: EPCRA category (Cyanide Compounds), EPCRA specifically liste Report as: EPCRA specific chemical (Hydrogen Cyanide)

1,2,4 Trichlorobenzene: EPCRA specifically listed, CERCLA category (Chlorinated Benzenes)

Report as: EPCRA specific chemical (1,2,4 Trichlorobenzene)

Row 3:

When a specifically listed CERCLA chemical falls within an EPCRA listed category, it should be reported **only under the EPCRA chemical category and not under the specific chemical name.**

✓ Example

Calcium Cyanide: EPCRA category (Cyanide Compounds), CERCLA specifically listed Report as: EPCRA category (Cyanide Compounds)

Row 4:

When a specifically listed CERCLA chemical falls within a CERCLA listed category, it should be reported **only as the specific CERCLA chemical.**

✓ Example

• Benzenesulfonyl Chloride: CERCLA specifically listed, CERCLA category (Chlorinated Benzenes)

Report as: CERCLA specific chemical (Benzenesulfonyl Chloride)

Row 5:

Chemicals falling under an EPCRA chemical category or categories which are not specifically listed under EPCRA or CERCLA, should be reported under the EPCRA chemical category or categories.

✓ Example: Lead Chromate, Reporting Two Competing Compound Classes

If you are reporting lead chromate you need to report under the lead compounds and chromium compounds categories

• Report the SAME weight for Lead Compounds and Chromium Compounds use (total weight of the compound) on EACH Form S.

- For Byproduct tracking, report ONLY the weight of the reportable constituent for each category.
- In Optional Section 2 of each Form S, enter the weight of the chemical in d.
- Even though you will file 2 separate Form Ss for Lead Compounds and Chromium Compounds, you will **pay only ONE TURA fee for both chemicals**. (Example Form Ss are shown on the next page.)

Row 6:

Chemicals falling under an EPCRA chemical category and a CERCLA chemical category which are not specifically listed under EPCRA or CERCLA should be reported under the EPCRA chemical category.

Row 7:

Chemicals that only are listed as a CERCLA category are not reportable.

CERCLA Category only: phthalate esters, polynuclear aromatic hydrocarbons, polycyclic organic matter, glycol ethers, chlorinated phenols, etc. should NOT be reported unless they are specifically named.

√ Form S	Example:	
Section 1	: Facility-Wide Use of	Listed Chemical
1026	Lead Compounds	
a. CAS#	b. Grionnical Hame (Bit	oxin will be assumed to be grams, decimal points may be used)
each application	cable category. NOTE: 'C	in a. Enter the total amount (in POUNDS, except for dioxin) for Senerated as byproduct' (item f.) generally means all waste he waste is treated or recycled. Please refer to the reporting on.
	c. Manufactured	d. Processed
		650
	e. Otherwise used	f. Generated as Byproduct
	66,000	
	g. Shipped in or as product	
Section 2	2: Optional Questions	
equal the si c,d and e a reasons tha	um of f and g. In other word are not in approximate balar	e in Section 1 are added together, the sum will in many cases ds, lines c,d and e will often form a "materials balance." If lines nce, you may use this section to explain why. Indicate all the umber of pounds on the appropriate line below (e.g., 4,000)
a Chemi	cal was recycled on site	h Chemical was consumed or transformed

	300; 33,000
c. Chemical was held in inventory	d. Chemical is a compound
e. Other (explain below)	
	ur facility during the reporting year which affected the data es, please explain.
Section 1: Facility-Wide Use of	Listed Chemical
1012 Chromium Compo	
a. CAS # b. Chemical Name (Di	ioxin will be assumed to be grams, decimal points may be used)
	Generated as byproduct' (item f.) generally means all waste the waste is treated or recycled. Please refer to the reporting tion.
c. Manufactured	d. Processed
	350
e. Otherwise used	f. Generated as Byproduct
33,000 g. Shipped in or as product	
Section 2: Optional Questions	
equal the sum of f and g. In other wor c,d and e are not in approximate bala	d e in Section 1 are added together, the sum will in many cases ds, lines c,d and e will often form a "materials balance." If lines ince, you may use this section to explain why. Indicate all the number of pounds on the appropriate line below (e.g., 4,000)
a. Chemical was recycled on site	b. Chemical was consumed or transformed
c. Chemical was held in inventory	See above d. Chemical is a compound
e. Other (explain below)	
	ur facility during the reporting year which affected the data es, please explain.

Summary of TURA Reportable Chemical Categories

TURA requires reporting on the chemical categories listed below. The individual chemicals included in each chemical category should always be reported in their parent chemical category (e.g., antimony compounds), and not as individual chemicals. Please note that this is not an exhaustive list of individual chemicals within the chemical categories.

Chemical Category	CAS No.	Chemical Name
Antimony Compounds	1309-64-4	Antimony Trioxide
Includes any unique chemical	7647-18-9	Antimony Pentachloride
substance that contains antimony as	7783-56-4	Antimony Trifluoride
part of the chemical's infrastructure. Includes, but is not limited to:	7789-61-9	Antimony Tribromide
merades, out is not immed to:	10025-91-9	Antimony Trichloride
	28300-74-5	Antimony Potassium Tartrate
	1	
Arsenic Componds	692-42-2	Diethylarsine
Includes any unique chemical	696-28-6	Dichlorophenylarsine
substance that contains arsenic	1303-28-2	Arsenic Pentoxide
as part of the chemical's	1303-32-8	Arsenic Disulfide
infrastructure. Includes, but is	1303-33-9	Arsenic Trisulfide
not limited to:	1327-52-2	Arsenic Acid
	1327-53-3	Arsenic Trioxide
	7631-89-2	Sodium Arsenate
	7645-25-2	Lead Arsenate
	7778-39-4	Arsenic Acid
	7778-44-1	Calcium Arsenate
	7784-34-1	Arsenous Trichloride
	7784-40-9	Lead Arsenate
	7784-41-0	Potassium Arsenate
	7784-46-5	Sodium Arsenite
	10102-48-4	Lead Arsenate
	10124-50-2	Potassium Arsenate
	52740-16-6	Calcium Arsenate
Borison Common de	542 62 1	Designer Constitution
Barium Compounds Includes any unique chemical	542-62-1	Barium Cyanide
substance that contains barium as part		
of the chemical's infrastructure. Does		
not include barium sulfate, CAS #		
7727-43-7. Includes, but is not limited to:		
minea to.		1

Chemical Category	CAS No.	Chemical Name
Beryllium Compounds	7787-47-5	Beryllium Chloride
Includes any unique chemical	7787-49-7	Beryllium Fluoride
substance that contains	7787-55-5	Beryllium Nitrate
beryllium as part of the		
chemical's infrastructure.		
Includes, but is not limited to:	13597-99-4	Beryllium Nitrate
Chemical Category	CAS No.	Chemical Name
Cadmium Compounds	543-90-8	Cadmium Acetate
Includes any unique chemical	7789-42-6	Cadmium Bromide
substance that contains		
cadmium as part of the		
chemical's infrastructure.		
Includes, but is not limited to:	10108-64-2	Cadmium Chloride
Chlorophenols	58-90-2	2,3,4,6-Tetrachlorophenol
Please see EPA 2001 TRI	87-65-0	2,6 Dichlorophenol
reporting instructions.	95-57-8	2-Chlorophenol
Includes, but is not limited to:	609-19-8	3,4,5 Trichlorophenol
	933-75-5	2,3,6 Trichlorophenol
	933-78-8	2,3,5 Trichlorophenol
	5344-82-1	2-Chlorophenolthiourea
	7005-72-3	Chlorophenyl Phenyl Ether
	15950-66-0	2,3,4 trichlorophenol
	25167-82-2	Trichlorophenol
	T	I are
Chromium Compounds	1066-30-4	Chromic Acetate
Includes any unique chemical	2146-10-8	Sodium Chromate
substance that contains	2151-06-8	Strontium Chromate
chromium as part of the	2151-16-3	Ammonium Bichromate
chemical's infrastructure.	7738-94-5	Chromic Acid
Includes, but is not limited to:	7778-50-9	Potassium Bichromate
	7788-98-9	Ammonium chromate
	7789-00-6	Potassium Chromate
	10049-05-5	Chromous Chloride
	10588-01-9	Sodium Bichromate
	10101-53-8	Chromic Sulfate
	11115-74-5	Chromic Acid
	13765-19-0	Calcium chromate
	14307-35-8	Lithium Chromate

Chemical Category	CAS No.	Chemical Name
carearies curegos,	0120 1101	

544-18-3	Cobaltous Formate
7789-43-7	Cobaltous Bromide
14017-41-5	Cobaltous Sulfamate
	7789-43-7

Copper Compounds		Copper,
Includes any unique chemical		bis(dimethylcarbamodithioato-
substance that contains copper	137-29-1	s-s)-
as part of the chemical's	544-92-3	Copper Cyanide
infrastructure. Does not	815-82-7	Cupric Tartrate
include copper phthalocyanine	3251-23-8	Cupric Nitrate
compounds that are substituted	5893-66-3	Cupric Oxalate
with only hydrogen, and/or	7447-39-4	Cupric Chloride
chlorine, and/or bromine.	7758-98-7	Cupric Sulfate
Includes, but is not limited to:	10380-29-7	Cupric Sulfate, Ammoniated

Cyanide Compounds	57-12-5	Cyanides
$X^{+}CN^{-}$ where $X = H^{+}$ or any other	143-33-9	Sodium Cyanide
group where a formal dissociation	151-50-8	Potassium Cyanide
may occur. For example KCN or CA(Cn) ₂ .	460-19-5	Cyanogen
Includes, but is not limited to:	506-61-6	Potassium Silver Cyanide
	506-64-9	Silver Cyanide
	506-68-3	Cynogen Bromide
	506-77-4	Cyanogen Chloride
	542-62-1	Barium Cyanide
	544-92-3	Copper Cyanide
	557-19-7	Nickel Cyanide
	557-21-1	Zinc Cyanide
	592-01-8	Calcium Cyanide
	592-04-1	Mercuric Cyanide
	592-85-8	Mercuric Thiocyanate
	592-87-0	Lead Thiocyanate
	1762-95-4	Ammonium Thiocyanate

Diisocyanates		3,3'-Dimethoxybenzidine-4,4' di-
Includes only the chemicals listed	91-93-0	isocyanate
here.		3-3'-Dimethyl-4,4'-diphenylene
	91-97-4	diisocyanate
		Methylenebis(phenylisocyanate)(MDI)
	101-68-8	(previously reportable under EPCRA)
	104-49-4	1,4 Phenylene diisocyanate
	123-61-5	1,3-Phenylene diisocyanate

	3-3' Dimethyl diphenylmethane-4-4'
120.25.2	1 1 1
139-25-3	siisocyanate
822-06-0	Hexamethylene 1,6 -diisocyanate
2556-36-7	1,4 Cyclohexane diisocyanate
3173-72-6	1,5 Naphthalene diisocyanate
4098-71-9	Isophorone diisocyanate
4128-73-8	4,4'-diisocyanatodiphenylether
	1,1-Methylene bis(4-isocyanato-
5124-30-1	cyclohexane
	Polmeric diphenylmethane
9016-87-9	diisocyanate
10347-54-3	1,4-Bis(methylisocyonate)cyclohexane
	2,4,4-Trimethylhexamethylene di-
15646-96-5	isocyanate
	2,2,4-Trimethylhexamethylene
16938-22-0	diisocyanate
	1,3-Bis(methylisocyanate)cyclo-
38661-72-2	hexane
	4-Methyldiphenylmethane-3,4-
75790-84-0	diisocyanate
75790-87-3	2,4'-Diisocyanatodiphenyl sulfide
134190-37-	Diethyldiisocyanatobenzene
7	

Dioxin & Dioxin-Like	•
Compounds	

Manufacturing; and the processing or otherwise use of dioxin or dioxin-like compounds if the dioxin and dioxin-like compounds are present as contaminants in a chemical and if they were created during the manufacture of that chemical. Includes only the chemicals listed here.

1746-01-6	2,3,7,8- Tetrachlorodibenzo-p-dioxin
3268-87-92	1,2,3,4,6,7,8,9- Octachlorodibenzo-p-dioxin
19408-74-3	1,2,3,7,8,9- Hexachlorodibenzo-p-dioxin
35822-46-9	1,2,3,4,6,7,8- Heptachlorodibenzo-p-dioxin
39001-02-0	1,2,3,4,6,7,8,9- Octachlorodibenzofuran
39227-28-6	1,2,3,4,7,8 Hexachlorodibenzo-p-dioxin
40321-76-4	1,2,3,7,8 Pentachlorodibenzo-p-dioxin
51207-31-9	2,3,7,8- Tetrachlorodibenzofuran
55673-89-7	1,2,3,4,7,8,9- Heptachlorodibenzofuran
57117-31-4	2,3,4,7,8- Pentachlorodibenzofuran
57117-41-6	1,2,3,7,8- Pentachlorodibenzofuran
57117-44-9	1,2,3,6,7,8- Hexachlorodibenzofuran
57653-85-7	1,2,3,6,7,8- Hexachlorodibenzo-p-dioxin
60851-34-5	2,3,4,6,7,8- Hexachlorodibenzofuran
67562-39-4	1,2,3,4,6,7,8- Heptachlorodibenzofuran
70648-26-9	1,2,3,4,7,8- Hexachlorod-benzofuran
72918-21-9	1,2,3,7,8,9- Hexachlorodibenzofuran

Ethylenebisdithiocarbamic acid,	111-54-6	Ethylenebisdithiocarbamic acid, salts, esters
salts, esters		
Includes any unique chemical		
substance that contains an EBDC or		
an EBDC salt as part of that		
chemical's infrastructure. Includes,		
but is not limited to:		

Certain Glycol Ethers Please see guidance on page B-3 of		
this document.		
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Lead Compounds	301-04-2	Lead Acetate
Includes any unique chemical	592-87-0	Lead Thiocyanate
substance that contains lead as	1072-35-1	Lead Stearate
part of the chemical's	1314-87-0	Lead Sulfide
infrastructure. Includes, but is	1335-32-6	Lead Subacetate
not limited to:	7428-48-0	Lead Stearate
	7446-27-7	Lead Phophate
	7446-14-2	Lead Sulfate
	7645-25-2	Lead Arsenate
	7758-95-4	Lead Chloride
	7783-46-2	Lead Fluoride
	10099-74-8	Lead Nitrate
	10101-63-0	Lead Iodide
	10102-48-4	Lead Arsenate
	13814-96-5	Lead Fluoborate
	15739-80-7	Lead Sulfate
	52652-59-2	Lead Stearate
	56189-09-4	Lead Stearate
	1	
Manganese Compounds	7722-64-7	Potassium Permanganate
Includes any unique chemical		
substance that contains lead as		
part of the chemical's		
infrastructure. Includes, but is not limited to:		Manganasa
not innited to.	15339-36-3	Manganese, bis(dimethylcarbamodithiato-s-s)
	13339-30-3	bis(difficulty)carbamodiumato-s-s)
Mercury Compounds	592-04-1	Mercuric Cyanide
Includes any unique chemical	592-85-8	Mercuric Thiocyanate
substance that contains	628-86-4	Mercury Fulminate
mercury as part of the	7782-86-7	Mercurous Nitrate
chemical's infrastructure.	7783-35-9	Mercuric sulfate
Includes, but is not limited to:	10415-75-5	Mercurous Nitrate
	10045-94-0	Mercuric Nitrate
Nickel Compounds	557-19-7	Nickel Cyanide
Includes any unique chemical	7718-54-9	Nickel chloride
substance that contains nickel	7786-81-4	Nickel Sulfate
as part of the chemical's	12054-48-7	Nickel Hydroxide
infrastructure. Includes, but is	13463-39-3	Nickel Carbonyl
not limited to:	14216-75-2	Nickel Nitrate
	15699-18-0	Nickel Ammonium Sulfate
	37211-05-5	Nickel chloride

CAS No.

Chemical Name

Chemical Category

Chemical Category	CAS No.	Chemical Name
Nicotine and Salts Includes any unique chemical substance that contains nicotine or a nicotine salt as part of the chemical's infrastructure. Includes, but is not limited to:	54-11-5	Nicotine
Nitrate Compounds (water	1004-54-0	Mercuric Nitrate
dissociable)	7761-88-8	Silver Nitrate
Includes, but is not limited to:	7779-88-6	Zinc Nitrate
	7782-86-7	Mercurous Nitrate
	7787-55-5	Beryllium Nitrate
	10099-74-8	Lead Nitrate
	10102-06-4	Uranyl nitrate
	10102-45-1	Thallium Nitrate
	10415-75-5	Mercurous Nitrate
	10421-48-4	Ferric Nitrate
	13597-99-4	Beryllium Nitrate
	13746-89-9	Zirconium Nitrate
	14216-75-2	Nickel Nitrate
	36478-76-9	Uranyl Nitrate
Polybrominated Biphenyls (PBBs) Please see EPA guidance.		
Polychlorinated alkanes Please see EPA guidance.		
Polycyclic Aromatic Compounds	50-32-8	Benzo(a)pyrene
Includes only the chemicals listed	53-70-3	Dibenzo(a,h)anthracene
here.	56-49-5	3-Methylcholanthrene
	56-55-3	Benz(a)anthracene
	57-97-6	7,12-Dimethylbenz(a)anthracene
	189-55-9	Benzo(r,s)pentaphene
	189-64-0	Benzo(a,h)pyrene
	191-30-0	Dibenzo(a,l)pyrene
	192-65-4	Dibenzo(a,e)pyrene
	193-39-5	Indeno[1,2,3-cd]pyrene
	194-59-2	7H-Dibenzo(c,g)carbazole
	205-99-2	Benzo(b)fluoranthene
	205-82-3	Benzo(j)fluoranthene
	206-44-0	Benzo(j.k)fluorene
	207-08-9	Benzo(k)fluoranthene
	218-01-9	Benzo(a)phenanthrene

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	224-42-0	Dibenz(a,j)acridine
	226-36-8	Dibenz(a,h)acridine
	3697-24-3	5-Methylchrysene
	5385-75-1	Dibenzo(a,e)Fluoranthene
	5522-43-0	1-Nitropyrene
	П	1,7
Selenium Compounds		Carbamodithioic Acid, dimethyl-
Includes any unique chemical		,Tetraanhydrosulfid with
substance that contains	144-34-3	Orthothioselenious Acid
selenium as part of the	630-10-4	Selenourea
chemical's infrastructure.	7446-08-4	Selenium Dioxide
Includes, but is not limited to:	7488-56-4	Selenium sulfide
merades, ear is not immed to:	7782-82-3	Sodium Selenite
	7783-00-8	Selenious Acid
	10102-18-8	Sodium Selenite
	12039-52-0	Selenious Acid, Dithallium (1+) Salt
	506.61.6	D
Silver Compounds	506-61-6	Potassium Silver Cyanide
Includes any unique chemical	506-64-9	Silver Cyanide
substance that contains silver		
as part of the chemical's		
infrastructure. Includes, but is		
not limited to:		
	7761-88-8	Silver Nitrate
		Dirver ratiface
Strychnine and Salts	57-24-9	Strychnine and Salts
Includes any unique chemical		
Includes any unique chemical substance that contains		
Includes any unique chemical substance that contains strychnine or a strychnine salt		
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's		
Includes any unique chemical substance that contains strychnine or a strychnine salt		
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's		
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is		
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to:	57-24-9	Strychnine and Salts
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds	57-24-9	Strychnine and Salts Thallium Acetate
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical	57-24-9 563-68-8 1314-32-5	Strychnine and Salts Thallium Acetate Thallic Oxide
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains	563-68-8 1314-32-5 6533-73-9	Thallium Acetate Thallic Oxide Thallous Carbonate
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the	57-24-9 563-68-8 1314-32-5	Strychnine and Salts Thallium Acetate Thallic Oxide
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure.	563-68-8 1314-32-5 6533-73-9	Thallium Acetate Thallic Oxide Thallous Carbonate
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the	563-68-8 1314-32-5 6533-73-9 7446-18-6	Thallium Acetate Thallic Oxide Thallous Carbonate Thallium sulfate
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure.	563-68-8 1314-32-5 6533-73-9 7446-18-6 7791-12-0	Thallium Acetate Thallic Oxide Thallous Carbonate Thallium sulfate Thallium Chloride
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure.	563-68-8 1314-32-5 6533-73-9 7446-18-6 7791-12-0 10031-59-1 10102-45-1	Thallium Acetate Thallic Oxide Thallium Sulfate Thallium Chloride Thallium sulfate Thallium Sulfate Thallium Nitrate
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure.	563-68-8 1314-32-5 6533-73-9 7446-18-6 7791-12-0 10031-59-1	Thallium Acetate Thallic Oxide Thallous Carbonate Thallium sulfate Thallium Chloride Thallium sulfate
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure.	563-68-8 1314-32-5 6533-73-9 7446-18-6 7791-12-0 10031-59-1 10102-45-1	Thallium Acetate Thallic Oxide Thallium Sulfate Thallium Chloride Thallium sulfate Thallium Sulfate Thallium Nitrate
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure. Includes, but is not limited to: Vanadium Compounds Includes any unique chemical	563-68-8 1314-32-5 6533-73-9 7446-18-6 7791-12-0 10031-59-1 10102-45-1 12039-52-0	Thallium Acetate Thallic Oxide Thallium Salts Thallium Carbonate Thallium sulfate Thallium Chloride Thallium Sulfate Thallium Sulfate Thallium Nitrate Selenious Acid, dithallium (1+0 Salt
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure. Includes, but is not limited to: Vanadium Compounds Includes any unique chemical substance that contains vanadium as	563-68-8 1314-32-5 6533-73-9 7446-18-6 7791-12-0 10031-59-1 10102-45-1 12039-52-0	Thallium Acetate Thallic Oxide Thallium Salts Thallium Carbonate Thallium Sulfate Thallium Chloride Thallium Sulfate Thallium Sulfate Thallium Nitrate Selenious Acid, dithallium (1+0 Salt
Includes any unique chemical substance that contains strychnine or a strychnine salt as part of the chemical's infrastructure. Includes, but is not limited to: Thallium compounds Includes any unique chemical substance that contains thallium as part of the chemical's infrastructure. Includes, but is not limited to: Vanadium Compounds Includes any unique chemical	563-68-8 1314-32-5 6533-73-9 7446-18-6 7791-12-0 10031-59-1 10102-45-1 12039-52-0	Thallium Acetate Thallic Oxide Thallium Salts Thallium Carbonate Thallium Sulfate Thallium Chloride Thallium Sulfate Thallium Sulfate Thallium Nitrate Selenious Acid, dithallium (1+0 Salt

Zinc Compounds	127-82-2	Zinc Phenolsulfonate
Includes any unique chemical		Zinc, Bis(dimethylcarbomodithiato-
substance that contains zinc as	137-30-4	S,S)-
part of the chemical's	557-21-1	Zinc Cyanide
infrastructure. Includes, but is	557-34-6	Zinc Acetate
not limited to:	557-41-5	Zinc Formate
	1314-84-7	Zinc Phosphide
	1332-07-6	Zinc Borate
	3486-35-9	Zinc Carbonate
	7646-85-7	Zinc Chloride
	7699-45-8	Zinc Bromide
	7720-78-7	Zinc Sulfate
	7779-86-4	Zinc Hydrosulfite
	7779-88-6	Zinc Nitrate
	7783-49-5	Zinc Fluoride
		Zinc,Bis(diethylcarbamodithioato-
	14324-55-1	S,S)-
	14639-97-5	Zinc Ammonium Chloride
	14639-98-6	Zinc Ammonium Chloride
	16871-71-9	Zinc Silicofluoride
	52628-25-8	Zinc Ammonium Chloride

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CAS	NAME	C	313	ADD
71751-41-2	Abamectin		313	1995
83-32-9	Acenaphthene	С		1991
208-96-8	Acenaphthylene	С		1992
30560-19-1	Acephate		313	1995
75-07-0	Acetaldehyde	С	313	1990
75-87-6	Acetaldehyde, trichloro-	С		1991
60-35-5	Acetamide	С	313	1990
64-19-7	Acetic acid (concentrations of	С		1991
	12% or less are NOT reportable)			
108-05-4	Acetic acid ethenyl ester	С	X	1990
94-75-7	Acetic acid, (2,4-	С	X	1990
	dichlorophenoxy)-			
108-24-7	Acetic anhydride	С		1991
67-64-1	Acetone	С		1990
75-86-5	Acetone cyanohydrin	С	X	1991
75-05-8	Acetonitrile	С	313	1990
98-86-2	Acetophenone	С	313	1991
53-96-3	2-Acetylaminofluorene	С	313	1990
506-96-7	Acetyl bromide	С		1992
75-36-5	Acetyl chloride	С		1991
30560-19-1	Acetylphosphoramidothioic acid		X	1995
	O,S-dimethyl ester			
591-08-2	1-Acetyl-2-thiourea	С		1992
62476-59-9	Acifluorfen, sodium salt		313	1995
	Acrolein	С	313	1990
79-06-1	Acrylamide	С	313	1990
	Acrylic acid	С	313	1990
107-13-1	Acrylonitrile	С	313	1990
			_	

CAS	NAME	C	313	ADD
124-04-9	Adipic acid	С		1991
15972-60-8			313	1995
116-06-3	Aldicarb	С	313	1991
309-00-2	Aldrin	С	313	1990
	Allyl alcohol	С	313	1990
107-05-1	Allyl chloride	С	313	1990
107-11-9	Allylamine		313	1995
319-84-6	alpha-BHC	С	X	1992
88671-89-0	.alphaButylalpha(4-		X	1995
	chlorophenyl)-1H-1,2,4-triazole-1-			
	propanenitrile			
60168-88-9	.alpha(2-Chlorophenyl)alpha		X	1995
	4-chlorophenyl)-5-			
	pyrimidinemethanol			
	alpha - Endosulfan	С		1992
319-84-6	alpha-Hexachlorocyclohexane	С	313	1992
	alpha-Naphthylamine	С	313	1990
7429-90-5	Aluminum (fume or dust)		313	1990
	Aluminum oxide (fibrous forms)		313	1990
20859-73-8	Aluminum phosphide	C	313	1993
10043-01-3	Aluminum sulfate	C		1993
834-12-8	Ametryn		313	1995
117-79-3	2-Aminoanthraquinone		313	1990
60-09-3	4-Aminoazobenzene		313	1990
92-67-1	4-Aminobiphenyl	С	313	1990
	1-Amino-2-methylanthraquinone		313	1990
2763-96-4	5-(Aminomethyl)-3-isoxazolol	С		1992
504-24-5	4-Aminopyridine	С		1992

CAS: Chemical Abstract Service Registry Number

^{313:} EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,*: member of a chemical category – should not be reported as an individual chemical.

C: CERCLA Chemical – If a chemical is noted as ONLY a CERCLA chemical, then a STATE ONLY Form R as well as a Form S must be completed and submitted to DEP with your toxics use report.

	NAME	C		ADD
33089-61-1	Amitraz		313	1995
	Amitrole	С		1991
7664-41-7	Ammonia	С	313	1990
631-61-8	Ammonium acetate	С		1992
1863-63-4	Ammonium benzoate	С		1992
	Ammonium bicarbonate	С		1992
2151-16-3	Ammonium bichromate	С	*	1993
	Ammonium bifluoride	С		1992
10192-30-0	Ammonium bisulfite	С		1993
1111-78-0	Ammonium carbamate	С		1992
506-87-6	Ammonium carbonate	С		1992
12125-02-9	Ammonium chloride	С		1993
7788-98-9	Ammonium chromate	С	*	1993
3012-65-5	Ammonium citrate, dibasic	С		1992
13826-83-0	Ammonium fluoborate	С		1993
12125-01-8	Ammonium fluoride	С		1993
1336-21-6	Ammonium hydroxide	С		1992
5972-73-6	Ammonium oxalate	С		1992
6009-70-7	Ammonium oxalate	С		1992
14258-49-2	Ammonium oxalate	С		1993
131-74-8	Ammonium picrate	С		1991
16919-19-0	Ammonium silicofluoride	С		1993
	Ammonium sulfamate	С		1993
12135-76-1	Ammonium sulfide	С		1993
10196-04-0	Ammonium sulfite	С		1993
	Ammonium tartrate	С		1992
14307-43-8	Ammonium tartrate	С		1993
1762-95-4	Ammonium thiocyanate	С	*	1992

CAS	NAME	C	313	ADD
	Ammonium vanadate	С		1993
628-63-7	Amyl acetate	С		1992
101-05-3	Anilazine			1995
62-53-3	Aniline	С	313	1990
120-12-7	Anthracene	С	313	1990
7440-36-0	Antimony	С		1990
	Antimony Compounds	С	313	
7647-18-9	Antimony pentachloride	С		1993
	Antimony potassium tartrate	С	*	1993
7789-61-9	Antimony tribromide	С		1993
10025-91-9	Antimony trichloride	С		1993
7783-56-4	Antimony trifluoride	С	*	1993
1309-64-4	Antimony trioxide	С	*	1992
86-88-4	Antu	С		1991
12674-11-2	Aroclor 1016	С		1993
11104-28-2	Aroclor 1221	C		1993
11141-16-5	Aroclor 1232	С		1993
53469-21-9	Aroclor 1242	С		1993
12672-29-6	Aroclor 1248	С		1993
11097-69-1	Aroclor 1254	С		1993
11096-82-5	Aroclor 1260	С		1993
7440-38-2	Arsenic	C	313	1990
1327-52-2	Arsenic acid		*	1992
7778-39-4	Arsenic acid	С	*	1993
1001	Arsenic Compounds		313	
1303-32-8	Arsenic disulfide	С	*	1992
1303-28-2	Arsenic pentoxide	С	*	1992
1327-53-3	Arsenic trioxide	С	*	1992

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CAS	NAME	C	313	ADD
1303-33-9	Arsenic trisulfide	С	*	1992
1327-53-3	Arsenous oxide	С		1992
7784-34-1	Arsenous trichloride	С	*	1993
1332-21-4	Asbestos (friable)	С	313	1990
1912-24-9	Atrazine		313	1995
492-80-8	Auramine	С	X	1990
71751-41-2	Avermectin B1		X	1995
115-02-6	Azaserine	С		1991
86-50-0	Azinphos-methyl	С		1991
151-56-4	Aziridine	C C	X	1990
75-55-8	Aziridine, 2-methyl	С	X	1990
7440-39-3	Barium		313	1990
1002	Barium Compounds		N04	
			0	
	Barium cyanide	С		1992
	Bendiocarb		313	1995
1582-09-8	Benezeneamine, 2,6-dinitro-N,N-	С	X	1990
	dipropyl-4-(trifluoromethyl)-			
	Benfluralin			1995
17804-35-2				1995
56-55-3	Benz[a]anthracene	С		1991
			*	
	Benz[c]acridine	С		1992
	Benzal chloride	С		1990
	Benzamide			1990
23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-	С	X	1993
	dimethyl-2-propynyl			
71-43-2	Benzene	С	313	1990

CAS	NAME	C	313	ADD
72-43-5	Benzene, 1,1'-(2,2,2-	С	X	1990
	trichloroethylidene)bis [4-			
	methoxy-			
91-08-7	Benzene, 1,3-diisocyanato-2-	С	X	1990
	methyl-			
	Benzene, 1,3-diisocyanatomethyl-	С	X	1990
1836-75-5	Benzene, 2,4-dichloro-1-(4-		X	
	nitrophenoxy)-	_		
584-84-9	Benzene, 2,4-diisocyanato-1-	С	X	1990
	methyl-			
	Benzene, m-dimethyl-	С	X	1990
	Benzene, o-dimethyl-	С	X	1990
	Benzene, p-dimethyl-	С	X	1990
510-15-6	Benzeneacetic acid, 4-chloro-	С	X	
	.alpha(4-chlorophenyl)alpha			
	hydroxy-, ethyl ester			
135-20-6	Benzeneamine, N-hydroxy-N-		X	1990
	nitroso, ammonium salt			
1897-45-6	1,3-Benzenedicarbonitrile,		X	1990
	2,4,5,6-tetrachloro-			
122-09-8	Benzeneethanamine, alpha,alpha-	С		1991
	dimethyl-			
115-32-2	Benzenemethanol, 4-chloro-	С	X	1990
	.alpha4-chlorophenyl)alpha			
	(trichloromethyl)-			
	Benzenesulfonyl chloride	С		1991
	Benzenethiol	C C		1991
92-87-5	Benzidine	C	313	1990

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CAS	NAME	C	313	ADD
218-01-9	Benzo(a)phenanthrene	С	313 *	1992
22961-82-6	1,3-Benzodioxol-4-ol,2,2-	С		
	dimethyl-,(bendiocarbphenol)			
205-82-3	Benzo(j)fluoranthene		313 *	1995
207-08-9	Benzo(k)fluoranthene	С	313 *	1992
189-55-9	Benzo(rst)pentaphene	С	313 *	1991
50-32-8	Benzo[a]pyrene	С	313 *	1991
205-99-2	Benzo[b]fluoranthene	С	313 *	1992
1563-38-8	7-Benzofuranol,2,3-dihydro-2,2-	С		
	dimethyl-(carbofuran phenol)			
191-24-2	Benzo[ghi]perylene	С		1991
65-85-0	Benzoic acid	С		1991
57-64-7	Benzoic Acid	С		
	(Physostigminesalicylate)			
133-90-4	Benzoic acid, 3-amino-2,5-	С	X	1990
	dichloro-			
98-07-7	Benzoic trichloride	С	313	1990
100-47-0	Benzonitrile	С		1991
98-07-7	Benzotrichloride	С	X	1990
	Benzoyl chloride	С	313	1990
94-36-0	Benzoyl peroxide		313	1990
100-44-7	Benzyl chloride	С	313	1990

CAS	NAME	C	313	ADD
7440-41-7	Beryllium	С	313	1990
7787-47-5	Beryllium chloride	C		1993
1003	Beryllium Compounds	С	313	
7787-49-7	Beryllium fluoride	С		1993
7787-55-5	Beryllium nitrate	C C		1993
13597-99-4	Beryllium nitrate	С	*	1993
33213-65-9	beta - Endosulfan	С		1993
319-85-7	beta-BHC	С		1992
91-59-8	beta-Naphthylamine	C	313	1990
57-57-8	beta-Propiolactone	C	313	1990
82657-04-3	Bifenthrin		313	1995
1464-53-5	2,2'-Bioxirane	С	X	1990
92-52-4	Biphenyl	С	313	1990
108-60-1	Bis(2-chloro-1-methylethyl)ether	С	313	1990
111-91-1	Bis(2-chloroethoxy) methane	С	313	1991
111-44-4	Bis(2-chloroethyl) ether	С	313	1990
117-81-7	Bis(2-ethylhexyl)phthalate	С	X	1990
542-88-1	Bis(chloromethyl) ether	С	313	1990
97-74-5	Bis(dimethylthiocarbamoyl)	С		
	sulfide			
	(tetramethylthiurammonosulfide)			
38661-72-2	1 7		313	1995
	Bis(methylisocyanate)cyclohexan		*	
	е			
10347-54-3	•			1995
	Bis(methylisocyanate)cyclohexan		*	
	e			
56-35-9	Bis(tributyltin) oxide		313	1995

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CAS	NAME	C	313	ADD
10294-34-5	Borane, trichloro-		X	1995
7637-07-2	Borane, trifluoro-		X	1995
10294-34-5	Boron trichloride		313	1995
7637-07-2	Boron trifluoride		313	1995
314-40-9	Bromacil		313	1995
53404-19-6	Bromacil, lithium salt		313	1995
7726-95-6	Bromine		313	1995
598-31-2	Bromoacetone	С		1992
35691-65-7	1-Bromo-1-(bromomethyl)-1,3-		313	1995
	propanedicarbonitrile			
353-59-3	Bromochlorodifluoromethane		313	1992
75-25-2	Bromoform	С	313	1990
74-83-9	Bromomethane	С	313	1990
314-40-9	5-Bromo-6-methyl-3-(1-		X	1995
	methylpropyl)-2,4-(1H,3H)-			
	pyrimidinedione			
101-55-3	4-Bromophenyl phenyl ether	С		1991
75-63-8	Bromotrifluoromethane		313	1991
	Bromoxynil			1995
	Bromoxynil octanoate		313	
52-51-7	Bronopol	-	X	
357-57-3		С	313	1992
106-99-0	1,3-Butadiene		313	
	C			
	1,3-Butadiene, 2-methyl-	С		1991
4170-30-3	2-Butenal	С	X	
	2-Butenal, (e)-	C		1991
764-41-0	2-Butene, 1,4-dichloro-	С	X	1992

CAS	NAME	C	313	ADD
123-86-4	Butyl acetate	С		1991
	Butyl acrylate		313	1990
85-68-7	Butyl benzyl phthalate	С		1990
	Butylamine	С		1991
106-88-7	1,2-Butylene oxide	С	313	1990
1114-71-2	Butylethylcarbamothioic acid S-		X	1995
	propyl ester			
	Butyraldehyde		313	1990
	Butyric acid	С		1991
	C.I. Acid Green 3			1990
6459-94-5	C.I. Acid Red 114		313	1995
	C.I. Basic Green 4			1990
989-38-8	C.I. Basic Red 1		313	1990
	C.I. Direct Black 38		313	1990
28407-37-6	C.I. Direct Blue 218		313	1995
2602-46-2	C.I. Direct Blue 6		313	1990
16071-86-6	C.I. Direct Brown 95		313	1990
2832-40-8	C.I. Disperse Yellow 3		313	1990
81-88-9	C.I. Food Red 15			1990
3761-53-3	C.I. Food Red 5		313	1990
3118-97-6	C.I. Solvent Orange 7		313	1990
842-07-9	C.I. Solvent Yellow 14		313	1990
97-56-3	C.I. Solvent Yellow 3		313	1990
492-80-8	C.I. Solvent Yellow 34	С	313	1990
128-66-5	C.I. Vat Yellow 4		313	1990
75-60-5	Cacodylic acid	С		1991
7440-43-9	Cadmium	С	313	1990
543-90-8	Cadmium acetate	С	*	1992

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CAS	NAME	C	313	ADD
7789-42-6	Cadmium bromide	С		1993
10108-64-2	Cadmium chloride	C C	*	1993
1004	Cadmium Compounds	C	313	
7778-44-1	Calcium arsenate	С		1993
52740-16-6	Calcium arsenite	С	*	1993
75-20-7	Calcium carbide	С		1991
13765-19-0	Calcium chromate	С	*	1993
156-62-7	Calcium cyanamide	С	313	1990
592-01-8	Calcium cyanide	С	*	1992
26264-06-2	Calcium	С		1993
	dodecylbenzenesulfonate			
7778-54-3	Calcium hypochlorite	С		1993
8001-35-2	Camphechlor	С	X	1990
8001-35-2	Camphene, octachloro-	С	Χ	1990
133-06-2	Captan	С	313	1990
55285-14-8	Carbamic acid,	С		
	[(dibutylamino)thio]methyl-,2,3-			
	dihydro-2,2-dimethyl-7-			
	benzofuranyl ester(carbosulfan)			
10605-21-7	Carbamic acid, 1H-benzimidazol-	С		
	2-yl,methyl ester (carbendazim)			
28249-77-6	Carbamic acid, diethylthio-, S-(p-		X	1995
	chlorobenzyl)			
644-64-4	Carbamic acid, dimethyl-,1-	С		
	[(dimethylamino)carbonyl]-5-			
	methyl-1H-pyrazol-3-y-l			
	ester(Dimetilan)	_	1.5	1005
51-79-6	Carbamic acid, ethyl ester	С	X	1990

CAS	NAME	C	313	ADD
1129-41-5	Carbamic acid, methyl- 3-	С		
	methylphenyl ester (metolcarb)			
122-42-9	Carbamic acid, phenyl-, 1-	С		
	methylethyl ester (propham)			
119-38-0	Carbamic acid,dimethyl-, 3-	С		
	methyl-1-(1-methylethyl)-1H-			
	pyrazol-5-yl ester (isolan)			
101-27-9	Carbamic, (3-chlorophenyl)-,4-	C		
	chloro-2-butynyl ester(barban)			
51026-28-9	Carbamodithioic acid,	С		
	(hydroxymethyl)methyl-			
	,monopotassium salt (potassium			
	n-hydroxymethyl-n-			
	methyldithiocarbamate)			
12427-38-2	Carbamodithioic acid, 1,2-		X	
	ethanediylbis-, manganese			
	complex			
12122-67-7	Carbamodithioic acid, 1,2-		X	1990
	ethanediylbis-, zinc complex			
136-30-7	Carbamodithioic acid, dibutyl,	С		
	sodium salt (Sodium			
25.00	dibutyldithiocarbamate)			
95-06-7	Carbamodithioic acid, diethyl-, 2-	С		
	chloro-2-propenyl			
	ester(sulfallate)			
140 40 7	Corbomodithicis soid disthyd			
148-18-3	Carbamodithioic acid, diethyl-	С		
	,sodium salt (sodium			

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CAS	NAME	C	313	ADD
	diethyldithiocarbamate)			
144-34-3	Carbamodithioic acid, dimethyl-,	С	*	
	tetraanhydrosulfid with			
	orthothioselenious			
	acid(selenium,			
	tetrakis(dimethyldithiocarbamate)			
)			
2303-16-4	Carbamothioic acid, bis(1-	С	X	
	methylethyl)-S-(2,3-dichloro-2-			
	propenyl)ester			
2008-41-5	Carbamothioic acid, bis(2-	С		
	methylpropyl)-, S-ethyl ester			
	(butylate)			
52888-80-9	Carbamothioic acid, dipropyl-, S-	С		
	(phenylmethyl) ester			
	(prosulfocarb)			
1929-77-7	Carbamothioic acid, dipropyl-, S-	С		
	propyl ester (vemolate)			
	Carbaryl	С		1990
	Carbofuran	С	313	1992
52888-80-9	Carbomothioic acid, dipropyl-, S-	С		
	(phenylmethyl) ester			
	(prosulfocarb)			
	Carbon disulfide	С		1990
463-58-1	Carbon oxide sulfide (COS)		X	1990
56-23-5	Carbon tetrachloride	С		1990
75-44-5	Carbonic dichloride	С	X	1990
353-50-4	Carbonic difluoride	С		1992

CAS	NAME	C	313	ADD
79-22-1	Carbonochloridic acid,	С	X	1991
	methylester			
	Carbonyl sulfide	С		1990
5234-68-4				1995
	Catechol	С		1990
	CFC-11	С	X	1991
76-14-2	CFC-114		X	1991
	CFC-115			1991
75-71-8	CFC-12	С	X	1991
	CFC-13		X	1995
	Chinomethionat		313	1995
133-90-4	Chloramben	С	313	1990
305-03-3	Chlorambucil	С		1992
57-74-9	Chlordane	С	313	1990
1005	Chlordane (Technical Mixture and	С		
	Metabolites)			
115-28-6	Chlorendic acid			1995
	Chlorimuron ethyl		313	1995
1006	Chlorinated Benzenes	С		
1007	Chlorinated Ethanes	C C		
1008	Chlorinated Naphthalene	С		
	Chlophenols	С	313	
7782-50-5		С		1990
10049-04-4	Chlorine dioxide		313	1990
	Chlorine oxide (CIO2)		X	1990
494-03-1	Chlornaphazine	С		1992
	Chloroacetaldehyde	С		1991
79-11-8	Chloroacetic acid	С	313	1990

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		~		eu Api
CAS	NAME	C		ADD
	2-Chloroacetophenone	С	313	1990
	Chloroalkyl Ethers	С		
4080-31-3	1-(3-Chloroallyl)-3,5,7-triaza-1-		313	1995
	azoniaadamantane chloride			
51630-58-1	4-Chloro-alpha-(1-		X	1995
	methylethyl)benzeneacetic acid			
	cyano(3-phenoxyphenyl)methyl			
	ester			
108-90-7	Chlorobenzene	С	313	1990
	Chlorobenzilate	С	313	1990
66441-23-4	2-(4-((6-Chloro-2-		X	1995
	benzoxazolylen)oxy)phenoxy)pro			
	panoic acid, ethyl ester			
124-48-1	Chlorodibromomethane	C		1991
75-68-3	1-Chloro-1,1-difluoroethane		313	
75-45-6	Chlorodifluoromethane		313	
5902-51-2	5-Chloro-3-(1,1-dimethylethyl)-6-		X	1995
	methyl-2,4(1H,3H)-			
	pyrimidinedione			
75-00-3	Chloroethane	C	313	1990
110-75-8	2-Chloroethyl vinyl ether	С		1991
67-66-3	Chloroform	С	313	1990
74-87-3	Chloromethane	С	313	1990
27314-13-2	4-Chloro-5-(methylamino)-2-[3-		Χ	1995
	(trifluoromethyl)phenyl]-3(2H)-			
	pyridazinone			
542-88-1	Chloromethyl ether		Χ	1990
	Chloromethyl methyl ether	С	313	1990

CAS	NAME	C	313	ADD
3653-48-3	(4-Chloro-2-methylphenoxy)		X	1995
	acetate sodium salt			
94-74-6	(4-Chloro-2-methylphenoxy)		X	1995
	acetic acid			
563-47-3	3-Chloro-2-methyl-1-propene		313	1995
91-58-7	2-Chloronaphthalene	С		1991
51-75-2	2-Chloro-N-(2-chloroethyl)-N-		X	1990
	methylethanamine			
1912-24-9	6-Chloro-N-ethyl-N'-(1-		X	1995
	methylethyl)-1,3,5-triazine-2,4-			
	diamine			
64902-72-3	2-Chloro-N-(((4-methoxy-6-		X	1995
	methyl-1,3,5-triazin-2-			
	yl)amino]carbonyl)benzenesulfon			
	amide			
1918-16-7	2-Chloro-N-(1-methylethyl)-N-		X	1995
	phenylacetamide			
95-57-8	2-Chlorophenol	С		1991
	Chlorophenols	С	313	
43121-43-3	1-(4-Chlorophenoxy)-3,3-		X	1995
	dimethyl-1-(1H-1,2,4-triazol-1-yl)-			
	2-butanone			
76-06-2	Chloropicrin			1995
126-99-8	Chloroprene	С	313	1990
76578-14-8	2-(4-((6-Chloro-2-		X	1995
	quinoxalinyl)oxy]phenoxy)			
	propanoic acid ethyl ester			
3165-93-3	4-Chloro-o-toluidine,	С		1992

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CAS	NAME	C		ADD
	hydrochloride			
7005-72-3	4-Chlorophenyl phenyl ether	С	*	1992
	3-Chloropropionitrile	С	313	1992
7790-94-5	Chlorosulfonic acid	С		1993
63938-10-3	Chlorotetrafluoroethane		313	
354-25-6	1-Chloro-1,1,2,2-tetrafluoroethane		313	
2837-89-0	2-Chloro-1,1,1,2-tetrafluoroethane		313	
1897-45-6	Chlorothalonil		313	1990
1929-82-4	2-Chloro-6-		Χ	1995
	(trichloromethyl)pyridine			
75-88-7	2-Chloro-1,1,1-trifluoroethane		313	1995
75-72-9	Chlorotrifluoromethane		313	1995
77501-63-4	5-(2-Chloro-4-		X	1995
	(trifluoromethyl)phenoxy)-2-nitro-			
	2-ethoxy-1-methyl-2-oxoethyl			
	ester			
62476-59-9	5-(2-Chloro-4-		X	1995
	(trifluoromethyl)phenoxy)-2-			
	nitrobenzoic acid, sodium salt			
72178-02-0	5-(2-Chloro-4-		X	1995
	(trifluoromethyl)phenoxy)-N-			
	methylsulfonyl)-2-nitrobenzamide			
	3-Chloro-1,1,1-trifluoropropane		313	1995
68085-85-8	3-(2-Chloro-3,3,3-trifluoro-1-	X		1995
	propenyl)-2,2-			
	Dimethylcyclopropanecarboxylic			
	acid cyano(3-phenoxyphenyl)			
	methyl ester			

CAS NAME	C	313	ADD
2921-88-2 Chlorpyrifos	C		1992
5598-13-0 Chlorpyrifos methyl		313	1995
64902-72-3 Chlorsulfuron			1995
1066-30-4 Chromic acetate	С		1992
7738-94-5 Chromic acid	С		1993
11115-74-5 Chromic acid	C	*	1993
10101-53-8 Chromic sulfate	С	*	1993
7440-47-3 Chromium	С	313	1990
1012 Chromium Compounds	С	313	
10049-05-5 Chromous chloride	С	*	1993
218-01-9 Chrysene	С	X *	1992
7440-48-4 Cobalt			1990
1013 Cobalt Compounds	С	313	
7789-43-7 Cobaltous bromide	С		1993
544-18-3 Cobaltous formate	С		1992
14017-41-5 Cobaltous sulfamate	С	*	1993
1014 Coke Oven Emissions	С		
7440-50-8 Copper – reportable to EPA		313	1990
ONLY			
1015 Copper Compounds	С	313	
544-92-3 Copper cyanide	С	*	1992
137-29-1 Copper ,	С	*	
bis(dimethylcarbamodithioato-S-			
S)-(copper			
dimethyldithiocarbamate)			
56-72-4 Coumaphos	С		1991
8001-58-9 Creosote	С		1990
1319-77-3 Cresol (mixed isomers)	С	313	1990

CAS: Chemical Abstract Service Registry Number

313: EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,*: member of a chemical category – should not be reported as an individual chemical.

C: CERCLA Chemical – If a chemical is noted as ONLY a CERCLA chemical, then a STATE ONLY Form R as well as a Form S must be completed and submitted to DEP with your toxics use report.

			SOL	ieu Apii
CAS	NAME	C	313	ADD
4170-30-3	Crotonaldehyde	С	313	1992
123-73-9	Crotonaldehyde, (E)-	С		1991
98-82-	Cumene	С	313	1990
80-15-9	Cumene hydroperoxide	С	313	1990
	Cupferron		313	1990
	2 Cupric acetate	С		1991
12002-03-	Cupric acetoarsenite	С		1993
7447-39-	Cupric chloride	С		1992
3251-23-	Cupric nitrate	С	*	1992
5893-66-3	Cupric oxalate	С	*	1992
7758-98-	Cupric sulfate	С		1993
10380-29-	Cupric sulfate, ammoniated	С		1993
815-82-	Cupric tartrate	С	*	1992
21725-46-2	2 Cyanazine		313	1995
1010	Cyanide Compounds	С	N10 6	
57-12-	Cyanides (soluble salts and complexes)	С	_	1991
460-19-	Cyanogen	С	*	1992
506-68-	Cyanogen bromide	С	*	1992
506-77-	Cyanogen chloride	С	*	1992
506-77-	Cyanogen chloride ((CN)Cl)	С	*	1992
1134-23-2	2 Cycloate		313	1995
68-76-8	2,5-Cyclohexadiene-1,4-dione, 2,3,5-tris(1-aziridinyl)-		X	1990
110-82-	Cyclohexane	С	313	1990
	7 1,4-Cyclohexane diisocyanate		313 *	1995

CAS	NAME	C	313	ADD
58-89	-9 Cyclohexane, 1,2,3,4,5,6-	С	X	1990
	hexachloro-			
	,(1.alpha.,2.alpha.,3.beta.,4.alpha.,			
	5.alpha.,6.beta.)-			
	-0 Cyclohexanol		313	1995
	-1 Cyclohexanone	С		1991
131-89	-5 2-Cyclohexyl-4,6-dinitrophenol	C C		1991
50-18	-0 Cyclophosphamide	С		1991
68359-37	-5 Cyfluthrin		313	1995
68085-85	-8 Cyhalothrin		313	1995
94-75	5-7 2,4-D	С	313	1990
20830-81	-3 Daunomycin	С		1993
533-74	-4 Dazomet		313	1995
53404-60	-7 Dazomet, sodium salt		313	1995
94-75	-7 2,4-D Acid	С	X	1990
94-82	-6 2,4-DB		313	1995
96-12	-8 DBCP	С	Χ	1990
1929-73	-3 2,4-D butoxyethyl ester	С	313	1992
94-80	-4 2,4-D butyl ester	С	313	1991
2971-38	-2 2,4-D chlorocrotyl ester	С	313	1992
72-54	-8 DDD	С		1991
72-55	-9 DDE	С		1991
3547-04	-4 DDE	С		
3547-04	-4 DDET	С		
50-29	-3 DDT	C C C C C C		1991
10	17 DDT and Metabolites	С		
1163-19	-5 Decabromodiphenyl oxide		313	1990
	-8 DEF		X	1995

CAS: Chemical Abstract Service Registry Number

313: EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,*: member of a chemical category – should not be reported as an individual chemical.

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CAS	NAME	C	313	ADD
117-81-7	DEHP		X	1990
319-86-8	delta-BHC	С		1992
13684-56-5	Desmedipham			1995
94-11-1	2,4-D Esters	С	X	1991
94-79-1	2,4-D Esters	С		1991
94-80-4	2,4-D Esters	С	X	1991
1320-18-9	2,4-D Esters	C C	X	1992
1928-38-7	2,4-D Esters	С		1992
1928-61-6	2,4-D Esters	С		1992
1929-73-3	2,4-D Esters	С	X	1992
2971-38-2	2,4-D Esters	С	X	1992
25168-26-7	2,4-D Esters	С		1993
53467-11-1	2,4-D Esters	С		1993
1928-43-4	2,4-D 2-ethylhexyl ester		313	1995
53404-37-8	2,4-D 2-ethyl-4-methylpentyl ester		313	1995
18883-66-4	D-Glucose, 2-deoxy-2-	C		1993
	[[(methylnitrosoamino)-carbo			
117-81-7	Di(2-ethylhexyl) phthalate	С	313	1990
2303-16-4		С	313	1990
615-05-4	2,4-Diaminoanisole		313	1990
39156-41-7	2,4-Diaminoanisole sulfate		313	1990
	4,4'-Diaminodiphenyl ether		313	1990
496-72-0	Diaminotoluene	С		1992
823-40-5	Diaminotoluene	С		1992
	Diaminotoluene (mixed isomers)	С	313	1990
95-80-7	2,4-Diaminotoluene	С	313	1990
333-41-5	Diazinon	С	313	1992
334-88-3	Diazomethane	С	313	1990

CAS	NAME	C	313	ADD
226-36-8	Dibenz(a,h)acridine		313 *	1995
224-42-0	Dibenz(a,j)acridine		313 *	1995
53-70-3	Dibenz[a,h]anthracene	С	313 *	1991
189-55-9	Dibenz[a,i]pyrene	С	X *	1991
5385-75-1	Dibenzo(a,e)fluoranthene		313 *	1995
192-65-4	Dibenzo(a,e)pyrene		313 *	1995
189-64-0	Dibenzo(a,h)pyrene		313 *	1995
191-30-0	Dibenzo(a,I)pyrene		313 *	1995
132-64-9	Dibenzofuran	С	313	1990
	1,2-Dibromo-3-chloropropane	С		1990
	1,2-Dibromoethane	С	313	1990
1689-84-5	3,5-Dibromo-4-		X	1995
	hydroxybenzonitrile			
	Dibromotetrafluoroethane			1991
10222-01-2	2,2-Dibromo-3-		313	1995
	nitrilopropionamide			
	Dibutyl phthalate	С		1990
1918-00-9		С	313	1992
	Dichlobenil	С		1992
	Dichlone	С		1991
99-30-9	Dichloran		313	1995

CAS: Chemical Abstract Service Registry Number

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CAS	NAME	C	313	ADD
52645-53-1	3-(2,2-Dichloroethenyl)-2,2-		X	1995
	dimethylcyclopropane			
	carboxylic acid, (3-phenoxy-			
	phenyl)methyl ester			
68359-37-5	3-(2,2-Dichloroethenyl)-2,2-		X	
	dimethylcyclopropanecarboxylic			
	acid, cyano(4-fluoro-3-			
	phenoxyphenyl)methyl ester			
	Dichlorobenzene	С	X	1990
25321-22-6	Dichlorobenzene (mixed isomers)	С		1990
	1,2-Dichlorobenzene	С		1990
541-73-1	1,3-Dichlorobenzene	С	313	1990
106-46-7	1,4-Dichlorobenzene	С	313	1990
1018	Dichlorobenzidine	С		
91-94-1	3,3'-Dichlorobenzidine	C	313	1990
612-83-9	3,3'-Dichlorobenzidine		313	1995
	dihydrochloride			
64969-34-2	3,3'-Dichlorobenzidine sulfate		313	1995
75-27-4	Dichlorobromomethane	C	313	1990
764-41-0	1,4-Dichloro-2-butene	С	313	1992
1717-00-6	1,1-Dichloro-1-fluoroethane		313	
	1,2-Dichloro-1,1-difluoroethane		313	1995
75-71-8	Dichlorodifluoromethane	С	313	1991
75-34-3	1,1-Dichloroethane	С	X	1991
	1,2-Dichloroethane	С	313	1990
	1,1-Dichloroethylene	С	X	1990
	1,2-Dichloroethylene	С		1991
	1,2-Dichloroethylene		313	1990

CAS	NAME	C	313	ADD
111-44-4	Dichloroethyl ether	С	X	1990
75-43-4	Dichlorofluoromethane		313	
108-60-1	Dichloroisopropyl ether	С	X	1990
75-09-2	Dichloromethane	С	313	1990
1918-00-9	3,6-Dichloro-2-methoxybenzoic	С	X	1992
	acid			
1982-69-0	3,6-Dichloro-2-methoxybenzoic		X	1995
	acid, sodium salt			
	Dichloromethyl ether	С	X	1990
19666-30-9	3-(2,4-Dichloro-5-(1-		X	1995
	methylethoxy)phenyl)-5-(1,1-			
	dimethylethyl)-1,3,4-oxadiazol-			
	2(3H)-one			
101-05-3	4,6-Dichloro-N-(2-chlorophenyl)-		X	1995
	1,3,5-triazin-2-amine			
	2,6-Dichloro-4-nitroaniline		X	1995
422-56-0	3,3-Dichloro-1,1,1,2,2-		313	1995
	pentafluoropropane			
507-55-1	1,3-Dichloro-1,1,2,2,3-		313	1995
	pentafluoropropane			
136013-79-1	1,3-Dichloro-1,1,2,3,3-		313	1995
100 10 0	pentafluoropropane		242	400=
422-48-0	2,3-Dichloro-1,1,1,2,3-		313	1995
400.00.0	pentafluoropropane		0.40	4000
	2,4-Dichlorophenol	С		1990
50471-44-8	3-(3,5-Dichlorophenyl)-5-ethenyl-		X	1995
05554 44 0	5-methyl-2,4-oxazolidinedione		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	400=
35554-44-0	1-(2-(2,4-Dichlorophenyl)-2-(2-		X	1995

CAS: Chemical Abstract Service Registry Number

³¹³: EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,*: member of a chemical category – should not be reported as an individual chemical.

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Propenyloxy)ethyl)-1H-imidazole 75-99-0 2,2-Dichloropropionic acid C 1991	CAC	NI A IMITE	C		A DD
75-99-0 2,2-Dichloropropionic acid C 1991	CAS	NAME	<u> </u>	313	ADD
1-(2-(2,4-Dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl)-methyl-1H-1,2,4,-triazole 127564-92-5 Dichloropentafluoropropane 313 1995 13474-88-9 1,1-Dichloro-1,2,2,3,3-pentafluoropropane 111512-56-2 1,1-Dichloro-1,2,3,3,3-pentafluoropropane 422-44-6 1,2-Dichloro-1,1,2,3,3-pentafluoropropane 431-86-7 1,2-Dichloro-1,1,3,3,3-pentafluoropropane 542-88-1 Dichloromethyl ether C X 1995 1,1-Dichloropheno 2-(4-(2,4-Dichlorophenol) C * 1991 1,2,4-oxadiazolidine-3,5-dione 26638-19-7 Dichloropropane C 1993 1,2-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 1991 1,2-Dichloropropane C 1,3-Dichloropropane 1,3-Dichloropropane C 1,3-Dichloropropane 1,3-Dichloropropane C 1,3-Dichloropropane 1,3					
propyl-1,3-dioxolan-2-yl)-methyl- 1H-1,2,4,-triazole			С		
1H-1,2,4,-triazole 127564-92-5 Dichloropentafluoropropane 313 1995 13474-88-9 1,1-Dichloro-1,2,2,3,3-pentafluoropropane 313 1995 111512-56-2 1,1-Dichloro-1,2,3,3,3-pentafluoropropane 313 1995 422-44-6 1,2-Dichloro-1,1,2,3,3-pentafluoropropane 313 1995 431-86-7 1,2-Dichloro-1,1,3,3,3-pentafluoropropane 313 1995 542-88-1 Dichloromethyl ether C X 1990 97-23-4 Dichlorophene 313 1995 87-65-0 2,6-Dichlorophene 313 1995 51338-27-3 2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester X 1995 696-28-6 Dichlorophenylarsine C * 1995 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C X 1990	60207-90-1			X	1995
127564-92-5 Dichloropentafluoropropane 313 1995 13474-88-9 1,1-Dichloro-1,2,2,3,3-pentafluoropropane 313 1995 111512-56-2 1,1-Dichloro-1,2,3,3,3-pentafluoropropane 313 1995 422-44-6 1,2-Dichloro-1,1,2,3,3-pentafluoropropane 313 1995 431-86-7 1,2-Dichloro-1,1,3,3,3-pentafluoropropane 313 1995 542-88-1 Dichloromethyl ether C X 1990 97-23-4 Dichlorophene 313 1995 87-65-0 2,6-Dichlorophenol C * 1991 51338-27-3 2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester C * 1995 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1993 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C X 1991 542-75-6 1,3-Dichloropropene C X 1990		propyl-1,3-dioxolan-2-yl)-methyl-			
13474-88-9 1,1-Dichloro-1,2,2,3,3-pentafluoropropane 313 1995		1H-1,2,4,-triazole			
Dentafluoropropane 111512-56-2 1,1-Dichloro-1,2,3,3,3-pentafluoropropane 313 1995				313	1995
111512-56-2 1,1-Dichloro-1,2,3,3,3-pentafluoropropane 313 1995 422-44-6 1,2-Dichloro-1,1,2,3,3-pentafluoropropane 313 1995 431-86-7 1,2-Dichloro-1,1,3,3,3-pentafluoropropane 313 1995 542-88-1 Dichloromethyl ether C X 1990 97-23-4 Dichlorophene 313 1995 87-65-0 2,6-Dichlorophenol C * 1991 51338-27-3 2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester X 1995 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 313 1990 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C X 1991 542-75-6 1,3-Dichloropropene C X 1990	13474-88-9	1,1-Dichloro-1,2,2,3,3-		313	1995
		pentafluoropropane			
422-44-6 1,2-Dichloro-1,1,2,3,3-pentafluoropropane 313 1995 431-86-7 1,2-Dichloro-1,1,3,3,3-pentafluoropropane 313 1995 542-88-1 Dichloromethyl ether C X 1990 97-23-4 Dichlorophene 313 1995 87-65-0 2,6-Dichlorophenol C * 1991 51338-27-3 2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester X 1995 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 313 1990 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990	111512-56-2			313	1995
Pentafluoropropane 313 1995					
431-86-7 1,2-Dichloro-1,1,3,3,3-pentafluoropropane 313 1995 542-88-1 Dichloromethyl ether C X 1990 97-23-4 Dichlorophene 313 1995 87-65-0 2,6-Dichlorophenol C * 1991 51338-27-3 2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester X 1995 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C X 1991 542-75-6 1,3-Dichloropropene C X 1990	422-44-6			313	1995
Dentafluoropropane S42-88-1 Dichloromethyl ether C X 1990					
542-88-1 Dichloromethyl ether C X 1990 97-23-4 Dichlorophene 313 1995 87-65-0 2,6-Dichlorophenol C * 1991 51338-27-3 2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester X 1995 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990	431-86-7			313	1995
97-23-4 Dichlorophene 313 1995 87-65-0 2,6-Dichlorophenol C * 1991 51338-27-3 2-(4-(2,4-Dichlorophenoxy)phenoxy)propanoic acid, methyl ester X 1995 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990					
87-65-0 2,6-Dichlorophenol C * 1991 51338-27-3 2-(4-(2,4- X 1995 Dichlorophenoxy)phenoxy)propa noic acid, methyl ester C * 1992 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990			С		1990
51338-27-3 2-(4-(2,4- Dichlorophenoxy)phenoxy)propa noic acid, methyl ester X 1995 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C X 1991 542-75-6 1,3-Dichloropropene C X 1990	97-23-4	Dichlorophene		313	1995
Dichlorophenoxy)phenoxy)propa noic acid, methyl ester 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl- X 1995 1,2,4-oxadiazolidine-3,5-dione 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990	87-65-0	2,6-Dichlorophenol	С	*	1991
noic acid, methyl ester 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C X 1991 542-75-6 1,3-Dichloropropene C X 1990	51338-27-3	2-(4-(2,4-		X	1995
noic acid, methyl ester 696-28-6 Dichlorophenylarsine C * 1992 20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C X 1991 542-75-6 1,3-Dichloropropene C X 1990		Dichlorophenoxy)phenoxy)propa			
20354-26-1 2-(3,4-Dichlorophenyl)-4-methyl-1,2,4-oxadiazolidine-3,5-dione X 1995 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990					
1,2,4-oxadiazolidine-3,5-dione 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X	696-28-6	Dichlorophenylarsine	С	*	1992
1,2,4-oxadiazolidine-3,5-dione 26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X	20354-26-1	2-(3,4-Dichlorophenyl)-4-methyl-		Χ	1995
26638-19-7 Dichloropropane C 1993 78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990					
78-99-9 1,1-Dichloropropane C 1991 78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990	26638-19-7		С		1993
78-87-5 1,2-Dichloropropane C 313 1990 142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990					1991
142-28-9 1,3-Dichloropropane C 1991 542-75-6 1,3-Dichloropropene C X 1990			С	313	1990
542-75-6 1,3-Dichloropropene C X 1990	142-28-9	1,3-Dichloropropane	С		1991
8003-19-8 Dichloropropane - C 1993				X	1990
	8003-19-8	Dichloropropane -	С		1993

NAME	C	313	ADD
Dichloropropene (mixture)			
Dichloropropene	С		
2,3-Dichloropropene		313	1990
1,3-Dichloropropylene	С	313	1990
Dichlorotetrafluoroethane		313	1991
Dichlorotrifluoroethane		313	
		313	
1,1-Dichloro-1,2,2-trifluoroethane		313	
2,2-Dichloro-1,1,1-trifluoroethane		313	
1,2-Dichloro-1,1,2-trifluoroethane		313	
Dichlorvos	С	313	1990
			1995
	С		1990
		313	1995
Dieldrin	С		1991
Diepoxybutane			1990
	С		1990
Diethatyl ethyl			1995
Diethyl phthalate	С		1990
	С	313	1990
			1991
	С	*	1992
Diethyldiisocyanatobenzene			1995
Diethyl-n-nitronhenyl nhosnhate	C	**	1992
			1991
)	313	
	Dichloropropene 2,3-Dichloropropene 1,3-Dichloropropylene Dichlorotetrafluoroethane Dichloro-1,1,2-trifluoroethane 1,1-Dichloro-1,2,2-trifluoroethane 2,2-Dichloro-1,1,1-trifluoroethane 1,2-Dichloro-1,1,2-trifluoroethane Dichlorvos Diclofop methyl Dicofol Dicyclopentadiene Dieldrin Diepoxybutane Diethanolamine Diethyl phthalate Diethyl sulfate Diethylamine Diethylarsine	Dichloropropene C 2,3-Dichloropropene C 1,3-Dichloropropylene C Dichlorotetrafluoroethane Dichlorotrifluoroethane Dichloro-1,1,2-trifluoroethane 1,1-Dichloro-1,2,2-trifluoroethane 2,2-Dichloro-1,1,1-trifluoroethane 1,2-Dichloro-1,1,2-trifluoroethane 1,2-Dichloro-1,1,2-trifluoroethane Dichlorvos C Diclofop methyl Dicofol C Dicyclopentadiene Dieldrin C Diepoxybutane C Diethanolamine C Diethatyl ethyl Diethyl phthalate C Diethyl sulfate C Diethylamine C Diethylamine C Diethylarsine C Diethyldiisocyanatobenzene Diethyl-p-nitrophenyl phosphate C Diethylstilbestrol C Diflubenzuron	Dichloropropene C 313 1,3-Dichloropropylene C 313 Dichlorotetrafluoroethane 313 Dichlorotrifluoroethane 313 Dichloro-1,1,2-trifluoroethane 313 1,1-Dichloro-1,2,2-trifluoroethane 313 2,2-Dichloro-1,1,1-trifluoroethane 313 1,2-Dichloro-1,1,2-trifluoroethane 313 Dichloros C 313 Diclofop methyl 313 Dicyclopentadiene 313 Diethanolamine C 313 Diethanolamine C 313 Diethyl phthalate C 313 Diethyl sulfate C 313 Diethylamine C 313 Diethylamine C 313 Diethylarsine C * Diethylarsine C * Diethyl-p-nitrophenyl phosphate C Diethylstilbestrol C Diflubenzuron 313

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CAS	NAME	C	313	ADD
55290-64-7	2,3,-Dihydro-5,6-dimethyl-1,4-		X	1995
	dithiin 1,1,4,4-tetraoxide			
5234-68-4	5,6-Dihydro-2-methyl-N-phenyl-		X	1995
	1,4-oxathiin-3-carboxamide			
94-58-6	Dihydrosafrole	С	313	1991
1050	Diisocyanates (includes only 20		313	
	chemicals)			
4128-73-8	4,4'-Diisocyanatodiphenyl ether		313	1995
75790-87-3	2,4'-Diisocyanatodiphenyl sulfide		313	1995
			*	
	Diisopropylfluorophosphate	С		1991
309-00-2	1,4:5,8-Dimethanonaphthalene,	C	X	1990
	1,2,3,4,10,10-hexachloro-			
	1,4,4a,5,8,8a-hexahydro-			
	(1.alpha.,4.alpha.,4a.beta.,5.alpha.			
	,8.alpha.,8a.beta.)-			
	Dimethipin		313	1995
	Dimethoate	С		1991
119-90-4	3,3'-Dimethoxybenzidine	С	313	1990
20325-40-0	3,3'-Dimethoxybenzidine		313	1995
	dihydrochloride			
111984-09-9	3,3'-Dimethoxybenzidine		313	1995
	hydrochloride			
91-93-0	3,3'-Dimethoxybenzidine-4,4'-		313	1995
	diisocyanate		*	
2300-66-5	Dimethylamine dicamba		313	1995
124-40-3	Dimethylamine	С	313	1991
60-11-7	4-Dimethylaminoazobenzene	С	313	1990

CAS		NAME	C	313	ADD
	60-11-7	Dimethylaminoazobenzene	С	X	1990
	57-97-6	7,12-Dimethylbenz[a]anthracene	С	313 *	1991
•	119-93-7	3,3'-Dimethylbenzidine	С	313	1990
(612-82-8	3,3'-Dimethylbenzidine dihydrochloride		313	1995
417	766-75-0	3,3'-Dimethylbenzidine dihydrofluoride		313	1995
227	781-23-3	2,2-Dimethyl-1,3-benzodioxol-4-ol methylcarbamate		X	1995
	79-44-7	Dimethylcarbamyl chloride	С	313	1990
2	524-03-0	Dimethyl chlorothiophosphate		313	1995
	91-97-4	3,3'-Dimethyl-4,4'-diphenylene diisocyanate		313 *	1995
	139-25-3	3,3'-Dimethyldiphenylmethane- 4,4'-diisocyanate		313 *	1995
	68-12-2	Dimethylformamide	С	X	1995
	57-14-7	Dimethylhydrazine	С	X	1990
	57-14-7	1,1-Dimethyl hydrazine	С	313	1990
76	696-12-0	2,2-Dimethyl-3-(2-methyl-1- propenyl)cyclopropanecarboxylic acid (1,3,4,5,6,7-hexahydro-1,3- dioxo-2H-isoindol-2-yl)methyl ester	X		1995
260	002-80-2	2,2-Dimethyl-3-(2-methyl-1- propenyl)cyclopropanecarboxylic acid (3-phenoxyphenyl)methyl ester		X	1995

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CAS	NAME	C	313	ADD
105-67-9	2,4-Dimethylphenol	С	313	1990
2524-03-0			X	1995
	phosphorochloridothioate			
131-11-3	Dimethyl phthalate	С	313	1990
77-78-1	Dimethyl sulfate	С	313	1990
25154-54-5	Dinitrobenzene (mixed isomers)	С		1993
88-85-7	Dinitrobutyl phenol	С	313	1991
534-52-1	Dinitrocresol	_	X	1992
329-71-5	2,5-Dinitrophenol	С		1992
573-56-8	2,6-Dinitrophenol	С		1992
606-20-2	2,6-Dinitrotoluene	С	313	1990
534-52-1	4,6-Dinitro-o-cresol	С	313	1990
	4,6-Dinitro-o-cresol and salts	С		1992
25550-58-7	Dinitrophenol	С		1993
51-28-5	2,4-Dinitrophenol	С	313	1990
121-14-2	2,4-Dinitrotoluene	С	313	1990
610-39-9	3,4-Dinitrotoluene	С		1992
25321-14-6	Dinitrotoluene (mixed isomers)	С	313	1990
117-84-0	Di-n-octyl phthalate	С		1990
39300-45-3	Dinocap		313	1995
88-85-7	Dinoseb	С	X	1991
621-64-7	Di-n-propylnitrosamine	С	X	1990
123-91-1	1,4-Dioxane	С	313	1990
1060	Dioxin and Dioxin like		313	
	Compounds			
957-51-7	Diphenamid		313	
	Diphenylamine		313	1995
1019	Diphenylhydrazine	С		

CAS	NAME	C	313	ADD
122-66-7	1,2-Diphenylhydrazine	С	313	1990
152-16-9	Diphosphoramide, octamethyl-	C		1991
2164-07-0	Dipotassium endothall		313	1995
136-45-8	Dipropyl isocinchomeronate		313	1995
142-84-7	Dipropylamine	O		1991
19044-88-3	4-(Dipropylamino)-3,5-		X	1995
	dinitrobenzenesulfonamide			
85-00-7	Diquat	С		1991
2764-72-9	Diquat	С		1992
138-93-2	Disodium		313	1995
	cyanodithioimidocarbonate			
94-11-1	2,4-D isopropyl ester	С	313	1991
298-04-4	Disulfoton	С		1992
541-53-7	Dithiobiuret	C	X	1992
541-53-7	2,4-Dithiobiuret	O	313	1992
26419-73-8	1,3-Dithiolane-2-carboxaldehyde,	C		
	2,4-dimethyl-,O-			
	[(methylamino)carbonyl]oxime			
	(tripate)			
330-54-1		С	313	1992
	Dodecylbenzenesulfonic acid	С		1993
2439-10-3	Dodecylguanidine monoacetate		X	1995
2439-10-3	Dodine		313	1995
120-36-5	2,4-DP		313	1995
1320-18-9	2,4-D propylene glycol butyl ether	С	313	1992
	ester			
	2,4-D, salts and esters	C		1991
2702-72-9	2,4-D sodium salt		313	1995

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			SUL	ieu Api
CAS	NAME	C	313	ADD
28057-48-9	d-trans-Allethrin		313	1995
28057-48-9	d-trans-Chrysanthemic acid of d-		X	1995
	allethrone			
115-29-7	Endosulfan	С		1991
1020	Endosulfan and Metabolites	С		
1031-07-8	Endosulfan sulfate	С		1992
145-73-3	Endothall	С		1991
72-20-8	Endrin	С		1991
7421-93-4	Endrin aldehyde	С		1992
1021	Endrin and Metabolites	С		
106-89-8	Epichlorohydrin	С	313	1990
51-43-4	Epinephrine	С		1991
759-94-4	EPTC		X	1995
75-04-7	Ethanamine	С		1991
107-15-3	1,2-Ethanediamine	С		1991
630-20-6	Ethane, 1,1,1,2-tetrachloro-	С	X	1992
76-13-1	Ethane, 1,1,2-trichloro-1,2,2,-		X	1990
	trifluoro-			
	Ethane, 1,1'-oxybis-	С		1991
	Ethane, 1,1'-thiobis[2-chloro-		X	1990
	Ethane, chloro-	С	X	1990
	Ethanedinitrile	С		1992
	Ethaneperoxoic acid		X	1990
30558-43-1	Ethanimidothioci acid, 2-	С		
	(dimethylamino-n-hydroxy-2-oxo-			
	, methyl ester (A2213)			
16752-77-5	Ethanimidothioic acid, N-	С		1993
	[[methylamino)carbonyl]			

CAS	NAME	C	313	ADD
23135-22-0	Ethanimidothoic acid, 2-	С		
	(dimethylamino)-N-			
	[[(methylamino)carbonyl]oxy]-2-			
	oxo-, methyl ester (oxamyl)			
110-80-5	Ethanol, 2-ethoxy-	С	X	1990
5952-26-1	Ethanol,2,2-oxybis,dicarbamate	С		
	(diethylene glycol,dicarbamate)			
74-85-1	Ethene		X	1990
75-35-4	Ethene, 1,1-dichloro-	C	X	1990
75-01-4	Ethene, chloro-		X	1990
563-12-2	Ethion	C		1992
13194-48-4	Ethoprop		313	1995
13194-48-4	Ethoprophos		X	1995
110-80-5	2-Ethoxyethanol	С	313	1990
74051-80-2	2-(1-(Ethoxyimino) butyl)-5-(2-		Χ	1995
	(ethylthio)propyl)-3-hydroxyl-2-			
	cyclohexen-1-one			
25311-71-1	2-((Ethoxyl((1-		X	1995
	methylethyl)amino]phosphinothi			
	oyl]oxy) benzoic acid 1-			
	methylethyl ester			
	Ethyl acetate	С		1991
140-88-5	Ethyl acrylate	С	313	1990
31218-83-4	3-		X	1995
	((Ethylamino)methoxyphosphinot			
	hioyl)oxy)-2-butenoic acid, 1-			
	methylethyl ester			
100-41-4	Ethylbenzene	С	313	1990

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CAS	NAME	C	313	ADD
51-79-6	Ethyl carbamate		X	1990
75-00-3	Ethyl chloride	С	X	1990
541-41-3	Ethyl chloroformate		313	1990
90982-32-4	Ethyl-2-((((4-chloro-6-		X	1995
	methoxyprimidin-2-yl)-carbonyl)-			
	amino]sulfonyl)benzoate			
107-12-0	Ethyl cyanide	С		1991
759-94-4	Ethyl dipropylthiocarbamate		313	1995
74-85-1	Ethylene		313	1990
111-54-6	Ethylenebisdithiocarbamic acid,	С	X *	1991
	salts & esters			
111-54-6	Ethylenebisdithiocarbamic acid,		313	
	salts and esters			
107-15-3	Ethylenediamine	C		1991
60-00-4	Ethylenediamine-tetraacetic acid	С		1991
	(EDTA)			
106-93-4	Ethylene dibromide	С	X	1990
107-06-2	Ethylene dichloride		X	1990
107-21-1	Ethylene glycol	С	313	1990
75-21-8	Ethylene oxide	С	313	1990
96-45-7	Ethylene thiourea	С	313	1990
60-29-7	Ethyl ether	С		1991
97-63-2	Ethyl methacrylate	С		1991
62-50-0	Ethyl methanesulfonate	С		1991
151-56-4	Ethyleneimine	С	313	1990
	Ethylidene Dichloride	С		1991
52-85-7	Famphur	С	313	1991
60168-88-9	Fenarimol		313	1995

CAS NAME	C	313	ADD
13356-08-6 Fenbutatin oxide		313	1995
66441-23-4 Fenoxaprop ethyl			1995
72490-01-8 Fenoxycarb		313	1995
39515-41-8 Fenpropathrin		313	1995
55-38-9 Fenthion		313	1995
51630-58-1 Fenvalerate		313	1995
14484-64-1 Ferbam		313	1995
1185-57-5 Ferric ammonium citrate	С		1992
2944-67-4 Ferric ammonium oxalate	С		1992
55488-87-4 Ferric ammonium oxalate	С		1993
7705-08-0 Ferric chloride	С		1993
7783-50-8 Ferric fluoride	C		1993
10421-48-4 Ferric nitrate	С	*	1993
10028-22-5 Ferric sulfate	С		1993
10045-89-3 Ferrous ammonium sulfate	С		1993
7758-94-3 Ferrous chloride	С		1993
7720-78-7 Ferrous sulfate	С	*	1993
7782-63-0 Ferrous sulfate	С		1993
Fine mineral fibers	С		
Fine mineral fibers (c)	С		
69806-50-4 Fluazifop butyl		313	1995
2164-17-2 Fluometuron		313	1990
206-44-0 Fluoranthene	С	*	1992
86-73-7 Fluorene	С		1991
7782-41-4 Fluorine	С	313	1993
640-19-7 Fluoroacetamide	С		1992
62-74-8 Fluoroacetic acid, sodium salt	С	Χ	1991
51-21-8 Fluorouracil		313	1995

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CAS	NAME	C	313	ADD
51-21-8	5-Fluorouracil		X	
69409-94-5	Fluvalinate		313	1995
133-07-3	Folpet		313	1995
	Fomesafen			1995
50-00-0	Formaldehyde	С	313	1990
50-00-0	Formaldehyde (solution)	С	X	1990
64-18-6	Formic acid	С		1991
76-13-1	Freon 113		313	1990
110-17-8	Fumaric acid	С		1991
110-00-9	Furan	С		1991
109-99-9	Furan, tetrahydro-	С		1991
98-01-1	Furfural	С		1991
765-34-4	Glycidylaldehyde	С		1992
1022	Glycol Ethers	С	313	
1022	Glycol Ethers (d)	С		
70-25-7	Guanidine, N-methyl-N'-nitro-N-	С		1991
	nitroso-			
86-50-0	Guthion	С		1991
1023	Haloethers	С		
1024	Halomethanes	С		
353-59-3	Halon 1211		X	1992
75-63-8	Halon 1301		X	1991
124-73-2	Halon 2402		X	1991
2212-67-1	1H-Azepine-1 carbothioic acid,		X	1995
	hexahydro-S-ethyl ester			
354-14-3	HCFC-121		X	1995
	HCFC-121a		X	1995
306-83-2	HCFC-123		X	

CAS	NAME	C	313	ADD
354-23-4	HCFC-123a		X	
	HCFC-123b		X	
2837-89-0	HCFC-124		X	
354-25-6	HCFC-124a		X	
1649-08-7	HCFC-132b		X	
75-88-7	HCFC-133a		X	1995
	HCFC-141b		X	
75-68-3	HCFC-142b		X	
75-43-4	HCFC-21		X	
75-45-6	HCFC-22		X	
128903-21-9	HCFC-225aa		X	1995
422-48-0	HCFC-225ba		X	1995
422-44-6	HCFC-225bb		X	1995
422-56-0	HCFC-225ca		X	1995
507-55-1	HCFC-225cb		X	1995
13474-88-9	HCFC-225cc		X	
431-86-7	HCFC-225da		X	1995
136013-79-1	HCFC-225ea		X	1995
111512-56-2	HCFC-225eb		X	1995
460-35-5	HCFC-253fb		X	1995
194-59-2	7H-Dibenzo(c,g)carbazole			1995
			*	
	Heptachlor	С	313	1990
	Heptachlor and Metabolites	С		
	Heptachlor epoxide	С		1992
76-44-8	1,4,5,6,7,8,8-Heptachloro-	C	X	1990
	3a,4,7,7a-tetrahydro-4,7-methano-			
	1H-indene			

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CAS	NAME	C	313	ADD
87-68-3	Hexachloro-1,3-butadiene	С	313	1990
118-74-1	Hexachlorobenzene	С	313	1990
87-68-3	Hexachlorobutadiene	С	X	1990
	Hexachlorocyclohexane (all	С		
	isomers) CAS 608-73-1			
58-89-9	Hexachlorocyclohexane (gamma	С	X	1990
	isomer)			
77-47-4	Hexachlorocyclopentadiene	С	313	1990
67-72-1	Hexachloroethane	С	313	1990
1335-87-1	Hexachloronaphthalene		313	1990
70-30-4	Hexachlorophene	С	313	1991
1888-71-7	Hexachloropropene	С		1992
757-58-4	Hexaethyl tetraphosphate	С		1992
13356-08-6	Hexakis(2-methyl-2-		X	1995
	phenylpropyl)distannoxane			
822-06-0	Hexamethylene-1,6-diisocyanate	С	313 *	1995
680-31-9	Hexamethylphosphoramide	С	313	1990
110-54-3		С	X	1995
	Hexazinone			1995
	2,4-(1H,3H)-Pyrimidinedione, 5-		X	1995
	bromo-6-methyl-3-(1-			
	methylpropyl), lithium salt			
133-06-2	1H-Isoindole-1,3(2H)-dione,	С	Χ	1990
	3a,4,7,7a-tetrahydro-2-			
	[(trichloromethyl)thio]-			
67485-29-4	Hydramethylnon		313	1995
	Hydrazine	С	313	1990

CAS	NAME	C	313	ADD
10034-93-2	Hydrazine sulfate		313	1990
57-14-7	Hydrazine, 1,1-dimethyl-	С	X	1990
1615-80-1	Hydrazine, 1,2-diethyl-	С		1992
540-73-8	Hydrazine, 1,2-dimethyl-	С		1992
122-66-7	Hydrazine, 1,2-diphenyl-	С	X	1990
60-34-4	Hydrazine, methyl-	С	X	1990
122-66-7	Hydrazobenzene	С	X	1990
7647-01-0	Hydrochloric acid	С		1990
74-90-8	Hydrocyanic acid	С	X	1990
7664-39-3	Hydrofluoric acid	С	X	1990
7664-39-3	Hydrofluoric acid (conc. 50% or	С	X	1990
	greater)			
7647-01-0	Hydrogen chloride (anhydrous)	С	X	1990
	Hydrogen chloride (gas only)	С	X	1990
	Hydrogen cyanide	С		1990
	Hydrogen fluoride	С		1990
7664-39-3	Hydrogen fluoride (anhydrous)	С	X	1990
	Hydrogen sulfide	С		1993
80-15-9	Hydroperoxide, 1-methyl-1-	С	X	1990
	phenylethyl-			
123-31-9	Hydroquinone (manufactured	С	313	1990
	only)			
35554-44-0				1995
193-39-5	Indeno(1,2,3-cd)pyrene	С	313 *	1991
13463-40-6	Iron carbonyl (Fe(CO)5), (TB-5-		X	
10400 40 0	11)-			
13463-40-6	Iron, pentacarbonyl-		313	1995

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	NAME	C	313	ADD
123-92-2	iso-Amyl acetate	C		1991
110-19-0	iso-Butyl acetate	С		1991
78-83-1	Isobutyl alcohol	С		1991
78-81-9	iso-Butylamine	С		1991
78-84-2	Isobutyraldehyde		313	1990
79-31-2	iso-Butyric acid	С		1991
465-73-6	Isodrin	С		1992
25311-71-1	Isofenphos		313	1995
55-91-4	Isofluorphate	С		1991
78-59-1	Isophorone	С		1991
4098-71-9	Isophorone diisocyanate		313	1995
			*	
	Isoprene	С		1991
42504-46-1	Isopropanolamine	С		1993
	dodecylbenzene sulfonate			
67-63-0	Isopropyl alcohol (mfg-strong		313	1990
	acid process)			
	4,4'-Isopropylidenediphenol			1990
	Isosafrole	С		1990
	Isothiocyanatomethane		X	1995
143-50-0	•	С		1991
77501-63-4			313	1995
	Lasiocarpine	C C		1992
7439-92-1	Lead	С		1990
	Lead acetate	С		1992
7645-25-2	Lead arsenate	C	*	1993
	Lead arsenate	C		1993
10102-48-4	Lead arsenate	С	*	1993

CAS	NAME	C	313	ADD
7758-95-4	Lead chloride	С	*	1993
1026	Lead Compounds	С	313	
13814-96-5	Lead fluoborate	С		1993
7783-46-2	Lead fluoride	С	*	1993
10101-63-0	Lead iodide	С	*	1993
10099-74-8	Lead nitrate	C C	*	1993
7446-27-7	Lead phosphate	С		1992
1072-35-1	Lead stearate		*	1992
7428-48-0	Lead stearate	С	*	1992
52652-59-2	Lead stearate	С	*	1993
56189-09-4	Lead stearate	C C C C	*	1993
1335-32-6	Lead subacetate	С		1992
7446-14-2	Lead sulfate	С	*	1992
15739-80-7	Lead sulfate	С	*	1993
1314-87-0	Lead sulfide	С	*	1992
592-87-0	Lead thiocyanate	С	*	1992
	Lindane	С	313	1990
330-55-2	Linuron		313	1995
554-13-2	Lithium carbonate		313	1995
14307-35-8	Lithium chromate	С	*	1993
55406-53-6	3-lodo-2-propynyl		313	1995
	butylcarbamate			
121-75-5	Malathion	С	313	1991
	Maleic acid	С		1991
	Maleic anhydride	С	313	1990
123-33-1	Maleic hydrazide	С		1991
	Malononitrile	С	313	1991
12427-38-2	Maneb		313	1990

CAS: Chemical Abstract Service Registry Number

^{313:} EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,*: member of a chemical category – should not be reported as an individual chemical.

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CAS	NAME	C		ADD
7439-96-5	Manganese		313	1990
	Manganese Compounds	С	313	
	Manganese,	С	*	
	bis(dimethylcarbamodithioato-			
	S,S)-			
	(manganesedimethyldithiocarba			
	mate)			
	MBOCA	С	X	1990
149-30-4			X	1995
94-74-6			X	1995
	m-Cresol	С		1990
	m-Dinitrobenzene	С		1990
101-68-8	MDI	С	X *	1990
	Mechlorethamine		X	1990
	Mecoprop		313	1995
	Melphalan	С		1991
149-30-4	2-Mercaptobenzothiazole			1995
2032-65-7	Mercaptodimethur	С		1992
592-04-1	Mercuric cyanide	С	*	1992
10045-94-0	Mercuric nitrate	С		1993
7783-35-9	Mercuric sulfate	С	*	1993
592-85-8	Mercuric thiocyanate	С		1992
7782-86-7	Mercurous nitrate	С		1993
10415-75-5	Mercurous nitrate	С	*	1993
7439-97-6	Mercury	С		1990
1028	Mercury Compounds		313	
628-86-4	Mercury fulminate	С	*	1992
150-50-5	Merphos		313	1995

CAS	NAME	C	313	ADD
126-98-7	methacrylonitrile	С	313	1991
137-42-8	Metham sodium		313	1995
74-89-5	Methanamine	С		1991
75-50-3	Methanamine, N,N-dimethyl-	С		1991
124-40-3	Methanamine, N-methyl-	С	X	1991
62-75-9	Methanamine, N-methyl-N-	С	X	1990
	nitroso-			
74-87-3	Methane, chloro-	С	X	1990
107-30-2	Methane, chloromethoxy-	С	X	1990
624-83-9	Methane, isocyanato-	С	X	
542-88-1	Methane, oxybis[chloro-	С	X	1990
509-14-8	Methane, tetranitro-	C C		1992
67-66-3	Methane, trichloro-		X	1990
594-42-3	Methanesulfenyl chloride,	С		1992
	trichloro-			
74-93-1	Methanethiol	С	X	1991
17702-57-7	Methanimidamide, N,N-dimethyl-	C		
	N-[2-methyl-4-			
	[[(methylaino)carbonyl]oxy]phen			
	ol]-(Formparanate)			
23422-53-9	Methanimidamide, N,N-dimethyl-	С		
	N-[3-			
	[[(methylamino)carbonyl]oxylphe			
	nyl]-,monohydrochioride			
07.50.4	(formetanate hydrochloride)		0.46	4000
	Methanol	С		1990
5/-/4-9	4,7-Methanoindan,	С	X	1990
	1,2,3,4,5,6,7,8,8-octachloro-			

CAS: Chemical Abstract Service Registry Number

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CAS	NAME	C		ADD
	2,3,3a,4,7,7a-hexahydro-			
91-80-5	Methapyrilene	С		1991
20354-26-1			313	1995
	Methiocarb	С	313	1992
16752-77-5	Methomyl	С		1993
94-74-6	Methoxone		313	1995
3653-48-3	Methoxone sodium salt		313	1995
72-43-5	Methoxychlor	С	313	1990
109-86-4	2-Methoxyethanol		313	1990
101200-48-0	2-(4-Methoxy-6-methyl-1,3,5-		X	1995
	triazin-2-yl)-			
	methylamino)carbonyl)amino)sulf			
	onyl)-, methyl ester			
	Methyl acrylate			1990
	Methyl bromide	С	X	1990
	3-Methylcholanthrene	С		1991
	Methyl chloride		X	1990
79-22-1	Methyl chlorocarbonate	С		1991
71-55-6	Methyl chloroform	С	X	1990
79-22-1	methyl chloroformate	С	X	1991
3697-24-3	5-Methylchrysene		313 *	1995
75790-84-0	4-Methyldiphenylmethane-3,4-		313	1995
	diisocyanate		*	
2439-01-2	6-Methyl-1,3-dithiolo[4,5-		X	1995
	b]quinoxalin-2-one			
	4,4'-Methylenebis(2-chloroaniline)	C	313	1990
97-23-4	2,2'-Methylenebis(4-		X	1995

CAS	NAME	C	313	ADD
	chlorophenol)			
101-61-1	4,4'-Methylenebis(N,N-		313	1990
	dimethyl)benzenamine			
	4,4'-Methylenedianiline	С	313	1990
	Methyl ethyl ketone (MEK)	С		1990
	Methyl ethyl ketone peroxide	С		1992
	Methyl hydrazine	C C		1990
	Methyl iodide	С		1990
	Methyl isobutyl ketone	С		1990
	Methyl isocyanate	С		1990
	Methyl isothiocyanate			1995
	2-Methyllactonitrile	С		1991
	Methyl mercaptan	С	313	1991
	Methyl methacrylate	С		1990
	Methyl parathion	C C		1992
	2-Methylpyridine	С		1991
	Methyl tert-butyl ether	С	313	1990
5124-30-1	1,1'-Methylene bis(4-			1995
	isocyanatocyclohexane)		*	
	Methylene bromide	С		1990
	Methylene chloride	С	X	1990
	Methylthiouracil	С		1991
9006-42-2				1995
21087-64-9				1995
	Mevinphos	С	313	1993
	Mexacarbate	С		1992
	Michler's ketone		313	1990
50-07-7	Mitomycin C	С		1991

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CAS	NAME	C		ADD
554-84-7	m-Nitrophenol	С		1992
99-08-1	m-Nitrotoluene	С		1991
2212-67-1	Molinate		313	1995
1313-27-5	Molybdenum trioxide		313	1990
76-15-3	Monochloropentafluoroethane		313	1991
75-04-7	Monoethylamine	С		1991
74-89-5	Monomethylamine	С		1991
	Monuron		313	1995
2763-96-4	Muscimol	С		1992
505-60-2	Mustard gas		313	1990
108-38-3	m-Xylene	С	313	1990
	Myclobutanil		313	1995
40487-42-1	N-(1-Ethylpropyl)-3,4-dimethyl-		X	1995
	2,6-dinitrobenzenamine			
69409-94-5	N-(2-Chloro-4-		X	1995
	(trifluoromethyl)phenyl)-DL-			
	valine(+)-cyano(3-			
	phenoxyphenyl)methyl ester			
709-98-8			X	1995
0.404.4.0.4	Dichlorophenyl)propanamide		.,	4005
34014-18-1	N-(5-(1,1-Dimethylethyl)-1,3,4-		X	1995
00044 40 0	thiadiazol-2-yl)-N,N'-dimethylurea		V	4005
26644-46-2	N,N'-(1,4-Piperazinediylbis(2,2,2-		X	1995
	trichloroethylidene)) bisformamide			
7297 10 6	N,N'-Bis(1-methylethyl)-6-		X	1995
1201-19-0	methylthio-1,3,5-triazine-2,4-		^	1333
	diamine			
	diaminic			

CAS	NAME	C	313	ADD
	N,N-Diethylaniline	С		
	N,N-Diethylaniline	С		
	N,N-Dimethylaniline	С		1990
68-12-2	N,N-Dimethylformamide	С		1995
142-59-6			313	1995
300-76-5		С		1992
91-20-3	Naphthalene	С	313	1990
3173-72-6	1,5-Naphthalene diisocyanate		313 *	1995
1338-24-5	Naphthenic acid	С		1992
63-25-2	1-Naphthalenol, methylcarbamate	С	X	1990
130-15-4	1,4-Naphthoquinone	C C		1991
71-36-3	n-Butyl alcohol	C	313	1990
	n-Butyl phthalate	С	X	1990
1861-40-1	N-Butyl-N-ethyl-2,6-dinitro-4-		X	1995
	(trifluoromethyl) benzenamine			
117-84-0	n-Dioctylphthalate	С		1990
834-12-8	N-Ethyl-N'-(1-methylethyl)-6-		X	1995
	(methylthio)-1,3,5,-triazine-2,4-			
	diamine			
	n-Hexane	С		1995
7440-02-0		С		1990
	Nickel ammonium sulfate	С		1993
	Nickel carbonyl	С		1993
	Nickel chloride	С		1993
	Nickel chloride	С		1993
	Nickel Compounds	000000	313	
557-19-7	Nickel cyanide	С	*	1992

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CAS	NAME	C	313	ADD
12054-48-7	Nickel hydroxide	С	*	1993
	Nickel nitrate	С		1993
7786-81-4	Nickel sulfate	С		1993
54-11-5	Nicotine	С	*	1991
1055	Nicotine and salts		313	
	Nitrapyrin		313	1995
1090	Nitrate compounds (water		313	
	dissociable)			
	Nitric acid	С		1990
	Nitric acid (conc 80% or greater)	С	X	1990
	Nitric oxide	С		1993
	Nitrilotriacetic acid			1990
98-95-3	Nitrobenzene	С	313	1990
92-93-3	4-Nitrobiphenyl	С	313	1990
1836-75-5			313	1990
10102-44-0	Nitrogen dioxide	С		1993
10544-72-6	Nitrogen dioxide	С		1993
51-75-2	Nitrogen mustard		313	1990
10102-43-9	Nitrogen oxide (NO)	С		1993
55-63-0	Nitroglycerin	С	313	1990
25154-55-6	Nitrophenol (mixed isomers)	С		1993
	Nitrophenols	С		
88-75-5	2-Nitrophenol	С	313	1990
79-46-9	2-Nitropropane	С	313	1990
5522-43-0	1-Nitropyrene		313	1995
			*	
1031	Nitrosamines	С		
62-75-9	Nitrosodimethylamine	C	X	1990

CAS	NAME	C	313	ADD
1321-12-6	Nitrotoluene	С		1992
872-50-4	N-Methyl-2-pyrrolidone		313	1995
924-42-5	N-Methylolacrylamide		313	1995
99-59-2	5-Nitro-o-anisidine		313	1990
	5-Nitro-o-toluidine	С	313	1991
	4-Nitrophenol	С	313	1990
1116-54-7	N-Nitrosodiethanolamine	С		1992
55-18-5	N-Nitrosodiethylamine	С	313	1990
62-75-9	N-Nitrosodimethylamine	С	313	1990
	N-Nitrosodi-n-butylamine	С	313	1990
621-64-7	N-Nitrosodi-n-propylamine	С	313	1990
86-30-6	N-Nitrosodiphenylamine	C	313	1990
4549-40-0	N-Nitrosomethylvinylamine	С	313	1990
59-89-2	N-Nitrosomorpholine	С		1990
759-73-9	N-Nitroso-N-ethylurea	С	313	1990
	N-Nitroso-N-methylurea	С	313	1990
615-53-2	N-Nitroso-N-methylurethane	С		1992
	N-Nitrosonornicotine			1990
	N-Nitrosopiperidine	С	313	1990
930-55-2	N-Nitrosopyrrolidine	С		1992
	Norflurazon		313	1995
107-10-8	n-Propylamine	С		1991
29232-93-7	O-(2-(Diethylamino)-6-methyl-4-		X	1995
	pyrimidinyl)-O,O-dimethyl			
	phosphorothioate			
41198-08-7	O-(4-Bromo-2-chlorophenyl)-O-		X	1995
	ethyl-S-propylphosphorothioate			
297-97-2	O,O-Diethyl O-pyrazinyl	С		1992

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CAS	NAME	C	313	ADD
	phosphorothioate			
3288-58-2	O,O-Diethyl S-methyl	C		1992
	dithiophosphate			
55-38-9	O,O-Dimethyl O-(3-methyl-4-		X	1995
	(methylthio) phenyl) ester,			
	phosphorothioic acid			
5598-13-0	O,O-Dimethyl-O-(3,5,6-trichloro-2-		X	1995
	pyridyl)phosphorothioate			
90-04-0	o-Anisidine	С	313	1990
134-29-2	o-Anisidine hydrochloride		313	1990
95-48-7	o-Cresol	С	313	1990
2234-13-1	Octachloronaphthalene		313	1990
29082-74-4	Octachlorostyrene			
1689-99-2	Octanoic acid, 2,6-dibromo-4-		Χ	1995
	cyanophenyl ester			
20325-40-0	o-Dianisidine dihydrochloride		Χ	1995
111984-09-9	o-Dianisidine hydrochloride		X	1995
95-50-1	o-Dichlorobenzene	C	X	1990
528-29-0	o-Dinitrobenzene	С	313	1990
35400-43-2	O-Ethyl O-(4-		Χ	1995
	(methylthio)phenyl)phosphorodit			
	hioic acid S-propyl ester			
8014-95-7	Oleum (fuming sulfuric acid)	С		1993
88-72-2	o-Nitrotoluene	С		1991
19044-88-3	Oryzalin		313	1995
	Osmium oxide OsO4 (T-4)-	С	Χ	1990
	Osmium tetroxide	С	313	1990
119-93-7	o-Tolidine	С	X	1990

CAS	NAME	C	313	ADD
	o-Tolidine dihydrochloride		X	1995
	o-Tolidine dihydrofluoride		X	1995
95-53-4	o-Toluidine	С	313	1990
636-21-5	o-Toluidine hydrochloride	С	313	1990
2164-07-0	7-Oxabicyclo(2.2.1)heptane-2,3-		X	1995
	dicarboxylic acid, dipotassium			
	salt			
	Oxirane	С	X	1990
106-89-8	Oxirane, (chloromethyl)-	С	X	1990
75-56-9	Oxirane, methyl-	С	X	1990
301-12-2	Oxydemeton methyl		313	1995
	Oxydiazon		313	1995
42874-03-3	Oxyfluorfen		313	1995
	o-Xylene	С	313	1990
10028-15-6	Ozone		313	1995
104-94-9	p-Anisidine		313	1990
	Paraformaldehyde	С		1993
123-63-7	Paraldehyde	С	313	1991
1910-42-5	Paraquat dichloride		313	1995
56-38-2	Parathion	С	313	1990
298-00-0	Parathion-methyl	С	Χ	1992
12002-03-8	Paris green	С		1993
106-51-4	p-Benzoquinone	C	Χ	1990
1336-36-3		С	Χ	1990
106-47-8	p-Chloroaniline	C C	313	1991
59-50-7	p-Chloro-m-cresol	С		1991
	p-Chloro-o-toluidine		313	1995
104-12-1	p-Chlorophenyl isocyanate		313	1995

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CAS	NAME	C	313	ADD
82-68-8	PCNB	С	X	1990
	p-Cresidine			1990
106-44-5	p-Cresol	С	313	1990
87-86-5	PCP		X	1990
	p-Dinitrobenzene	С	313	1990
1114-71-2	Pebulate		313	1995
40487-42-1	Pendimethalin		313	1995
608-93-5	Pentachlorobenzene	С		1992
76-01-7	Pentachloroethane			1991
82-68-8	Pentachloronitrobenzene		X	1990
87-86-5	Pentachlorophenol	С	313	1990
	1,3-Pentadiene	С		1992
1120-71-4	1,3-Propane sultone	С	X	1990
57-33-0	Pentobarbital sodium		313	1995
79-21-0	Peracetic acid		313	1990
127-18-4	Perchloroethylene		X	1990
594-42-3	Perchloromethyl mercaptan	С		1992
52645-53-1	Permethrin		313	1995
62-44-2	Phenacetin	С		1991
85-01-8	Phenanthrene	С	313	1991
108-95-2	Phenol	С	313	1990
114-26-1	Phenol, 2-(1-methylethoxy)-,	С	X	1990
	methylcarbamate			
64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate (m-Cumenyl methylcarbamate)	С		

CAS	NAME	C	313	ADD
2631-37-0	Phenol, 3-methyl-5-(1-	С		
	methylethyl)-, methyl carbamate			
	(promecarb)			
	Phenothrin			1995
72490-01-8	(2-(4-Phenoxy-phenoxy)-		X	1995
	ethyl)carbamic acid ethyl ester			
	Phenyl dichloroarsine	С		1992
23564-06-9			X	1995
	Phenylenebis(iminocarbonothioyl			
)) biscarbamic acid diethyl ester			
	1,2-Phenylenediamine			1995
	1,3-Phenylenediamine			1995
615-28-1	1,2-Phenylenediamine		313	1995
	dihydrochloride			
624-18-0	1,4-Phenylenediamine		313	1995
	dihydrochloride			
123-61-5	1,3-Phenylene diisocyanate			1995
			*	
104-49-4	1,4-Phenylene diisocyanate		313	1995
		_	*	4004
	Phenylmercuric acetate	С		1991
	Phenylmercury acetate	С		1991
10453-86-8	5-(Phenylmethyl)-3-		X	1995
	furanyl)methyl 2,2-dimethyl-3-(2-			
	methyl-1-			
	propenyl)cyclopropanecarboxylat			
00.40 =	e		0.46	4000
90-43-7	2-Phenylphenol		313	1990

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CAS	NAME	C	313	ADD
	Phenylthiourea	С		1991
57-41-0	Phenytoin		313	1995
298-02-2	Phorate	С		1992
75-44-5	Phosgene	С	313	1990
7803-51-2	Phosphine	С	313	1993
52-68-6	Phosphonic acid, (2,2,2-trichloro-	C	X	1990
	1-hydroxyethyl)-,dimethyl ester			
7664-38-2	Phosphoric acid	C		1990
961-11-5	Phosphoric acid, 2-chloro-1-		X	1990
	(2,3,5-trichlorophenyl) ethenyl			
	dimethyl ester			
62-73-7	Phosphoric acid, 2-	C	X	1990
	dichloroethenyl dimethyl ester			
13194-48-4	Phosphorodithioic acid O-ethyl		X	1995
	S,S-dipropyl ester			
56-38-2	Phosphorothioic acid, O,O-	С	X	1990
	diethyl-O-(4-nitrophenyl) ester			
7719-12-2	Phosphorous trichloride	С		1993
7723-14-0	Phosphorus	С		1993
7723-14-0	Phosphorus (yellow or white)	С	313	1990
10025-87-3	Phosphorus oxychloride	С		1993
7719-12-2	Phosphorus trichloride	С		1993
10025-87-3	Phosphoryl chloride	C C		1993
	Phthalate Esters	С		
85-44-9	Phthalic anhydride	С	313	1990
	Picloram			1995
109-06-8	2-Picoline	С	X	1991
	Picric acid		313	1990
	I control of the cont		1	

CAS	NAME	C	313	ADD
120-54-7	Piperidine, 1,1-	C		
	(tetrathiodicarbonothioyl)-bis-			
	(Bis(pentamenthylene)thiuram			
	tetrasulfide)			
	Piperonyl butoxide			1995
	Pirimiphos methyl			1995
	p-Nitroaniline	С		1991
	p-Nitrophenol	С	X	1990
156-10-5	p-Nitrosodiphenylamine		313	1990
99-99-0	p-Nitrotoluene	С		1991
1034	Polybrominated Biphenyls		N57	
	(PBBs)		5	
1045	Polychlorinated alkanes (C10 to		N58	
	C13)		3	
	Polychlorinated biphenyls	С		1990
1040	Polycyclic aromatic compounds		N59	
	(includes only 21 chemicals)		0	
	Polycyclic organic matter	С		
	Polycyclic Organic Matter (e)	С		
9016-87-9	Polymeric diphenylmethane		313	1995
	diisocyanate		*	
1035	Polynuclear Aromatic	C		
	Hydrocarbons			
	Potassium arsenate	С		1993
	Potassium arsenite	С		1993
7778-50-9	Potassium bichromate	С		1993
	Potassium bromate		313	1995
7789-00-6	Potassium chromate	С	*	1993

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CAS	NAME	C	313	ADD
151-50-8	Potassium cyanide	С	*	1991
128-03-0	Potassium		313	1995
	dimethyldithiocarbamate			
	Potassium hydroxide	С		1992
137-41-7	Potassium N-		313	1995
	methyldithiocarbamate			
7722-64-7	Potassium permanganate	С		1993
	Potassium silver cyanide	С		1992
	p-Phenylenediamine	С		1990
	Profenofos			1995
	Prometryn			1995
23950-58-5	Pronamide	С	313	1993
	Propachlor		313	1995
1646-88-4	Propanal, 2-methyl-2-	С		
	(methylsulfonyl)-			
	,[(methylamino)carbonyl] oxime			
	(Aldicarb sulfone)			
	Propane 1,2-dichloro-	С	X	1990
	Propane sultone	С	313	1990
	Propanenitrile	С		1991
	Propanil			1995
	Propargite	С		1992
	Propargyl alcohol	С		1991
	2-Propenal	С	X	1990
107-11-9	2-Propen-1-amine		X	
	Propene		X	1990
	1-Propene		X	1990
107-13-1	2-Propenenitrile	С	X	1990

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	CAS	NAME	C	313	ADD
	126-98-7	2-Propenenitrile, 2-methyl-	С	X	1991
	107-18-6	2-Propen-1-ol	С	X	1990
		Propetamphos		313	1995
	60207-90-1	Propiconazole		313	1995
	123-38-6	Propionaldehyde	С	313	1990
	79-09-4	Propionic acid	С		1991
	123-62-6	Propionic anhydride	С		1991
	107-12-0	Propionitrile	С		1991
	542-76-7	Propionitrile, 3-chloro-	С	X	1992
	114-26-1	Propoxur	С	313	1990
	115-07-1	Propylene		313	1990
	75-56-9	Propylene oxide	С	313	1990
	75-55-8	Propyleneimine	С	313	1990
	106-49-0	p-Toluidine	С		1991
	106-42-3	p-Xylene	C	313	1990
	129-00-0	Pyrene	С		1991
	121-21-1	Pyrethrins	C C		1991
	121-29-9	Pyrethrins	C		1991
	8003-34-7	Pyrethrins	С		1993
	110-86-1	Pyridine	С	313	1990
	54-11-5	Pyridine, 3-(1-methyl-2-	С		1991
		pyrrolidinyl)-,(S)-			
	504-24-5	Pyridine, 4-amino-	С		1992
	57-47-6	Pyrrolo[2,3-b] indol-5-ol,	С		
		1,2,3,3a,8,8a-hexahydro-1,3a,8-			
		trimethyl-, methylcarbamate			
ļ		(ester), (3aS-cis)-(Physostigmine)			
	91-22-5	Quinoline	C	313	1990

CAS: Chemical Abstract Service Registry Number

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CAS	NAME	C		ADD
	Quinone	С		1990
82-68-8	Quintozene	С	313	1990
76578-14-8	Quizalofop-ethyl		313	1995
50-55-	Reserpine	С		1991
10453-86-8	Resmethrin		313	1995
108-46-3	Resorcinol	С		1991
301-12-2	S-(2-(Ethylsulfinyl)ethyl) O,O-		X	1995
	dimethyl ester phosphorothioic			
	acid			
	S,S,S-Tributyltrithiophosphate			1995
	Saccharin (manufacturing)	С	313	1991
81-07-2	Saccharin and salts	С		1990
94-59-7	7 Safrole	С	313	1990
626-38-0	sec-Amyl acetate	С		1992
105-46-4	sec-Butyl acetate	С		1991
78-92-2	sec-Butyl alcohol		313	1990
513-49-	sec-Butylamine	С		1992
13952-84-6	sec-Butylamine	С		1993
7783-00-8	Selenious acid	С	*	1993
12039-52-0	Selenious acid, dithallium(1+) salt	С	*	1993
7782-49-2	Selenium	С	313	1990
1036	Selenium Compounds	С	313	
7446-08-4	Selenium dioxide	С	*	1992
7488-56-4	Selenium sulfide	С	*	1992
630-10-4	Selenourea	С	*	1992
74051-80-2	Sethoxydim		313	1995
	Silane, chlorotrimethyl-		X	1995
	Silane, dichlorodimethyl-		X	1995
	·	•	•	

CAS		NAME	C	313	ADD
75-	79-6	Silane, trichloromethyl-		X	1995
•	1095	Silica, crystalline (respirable, < 10			2002
		microns)			
7440-	22-4	Silver – file to EPA ONLY		313	1990
	1037	Silver Compounds	С	313	
506-	64-9	Silver cyanide	С	*	1992
7761-	8-88	Silver nitrate	С	*	1993
93-	72-1	Silvex (2,4,5-TP)	С		1991
122-	34-9	Simazine		313	1995
7440-	23-5	Sodium	С		1992
7631-	89-2	Sodium arsenate	С	*	1993
7784-	46-5	Sodium arsenite	С	*	1993
26628-	22-8	Sodium azide (Na(N3))	C C	313	1993
10588-	01-9	Sodium bichromate	С	*	1993
1333-	83-1	Sodium bifluoride	С		1992
7631-	90-5	Sodium bisulfite	C C		1993
2146-	10-8	Sodium chromate	С	*	1993
143-	33-9	Sodium cyanide (Na(CN))	С	*	1991
1982-	69-0	Sodium dicamba		313	1995
128-	04-1	Sodium dimethyldithiocarbamate		313	1995
25155-	30-0	Sodium	С		1993
		dodecylbenzenesulfonate			
7681-	49-4	Sodium fluoride	С		1993
62-	74-8	Sodium fluoroacetate	С	313	1991
16721-	80-5	Sodium hydrosulfide	С		1993
1310-	73-2	Sodium hydroxide	С		1992
7681-	52-9	Sodium hypochlorite	C		1993
10022-	70-5	Sodium hypochlorite	С		1993

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CAS	NAME	C	313	ADD
124-41-4	Sodium methylate	С		1991
	Sodium methyldithiocarbamate		X	1995
7632-00-0	Sodium nitrite	С	313	1993
132-27-4	Sodium o-phenylphenoxide			1995
131-52-2	Sodium pentachlorophenate		313	1995
7558-79-4	Sodium phosphate, dibasic	С		1992
	Sodium phosphate, dibasic	С		1993
	Sodium phosphate, dibasic	С		1993
7601-54-9	Sodium phosphate, tribasic	С		1993
7758-29-4	Sodium phosphate, tribasic	С		1993
	Sodium phosphate, tribasic	С		1993
10101-89-0	Sodium phosphate, tribasic	С		1993
10124-56-8	Sodium phosphate, tribasic	С		1993
10361-89-4	Sodium phosphate, tribasic	С		1993
7782-82-3	Sodium selenite	С		1993
10102-18-8	Sodium selenite	С		1993
2151-06-8	Strontium chromate	С		1993
	Strychnine	С		1991
	Strychnine and salts		313	
100-42-5	Styrene	С	313	1990
96-09-3	Styrene oxide	С	313	1990
3689-24-5		С		1992
12771-08-3	Sulfur monochloride	С		1993
1314-80-3	Sulfur phosphide	С		1992
7664-93-9	Sulfuric acid	С		1995
8014-95-7	Sulfuric acid (fuming)	С		1993
8014-95-7	Sulfuric acid, mixture with sulfur	С		1993

CAS	NAME	C	313	ADD
	trioxide			
2699-79-8	Sulfuryl fluoride		313	1995
35400-43-2				1995
93-76-5	2,4,5-T acid	С		1991
1319-72-8	2,4,5-T amines	С		1992
2008-46-0	2,4,5-T amines	С		1992
3813-14-7	2,4,5-T amines	C C C		1992
	2,4,5-T amines	С		1992
6369-97-7	2,4,5-T amines	С		1992
	Tebuthiuron			1995
3383-96-8	Temephos		313	1995
107-49-3		С		1991
5902-51-2			313	1995
625-16-1	tert-Amyl acetate	С		1992
	tert-Butyl acetate	С		1992
	tert-Butyl alcohol		313	1990
	tert-Butylamine	С		1991
	2,4,5-T esters	С		1991
	2,4,5-T esters	С		1992
	2,4,5-T esters	ပ ဂ ဂ		1992
	2,4,5-T esters	С		1993
	2,4,5-T esters	С		1993
	Tetrabromobisphenol A		313	
	1,2,4,5-Tetrachlorobenzene	С		1991
1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-	ပ		1992
	dioxin (TCDD)			
	1,1,1,2-Tetrachloroethane	С		1992
79-34-5	1,1,2,2-Tetrachloroethane	С	313	1990

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CAS	NAME	C	313	ADD
127-18-4	Tetrachloroethylene	С	313	1990
354-14-3	1,1,2,2-Tetrachloro-1-		313	1995
	fluoroethane			
354-11-0	1,1,1,2-Tetrachloro-2-		313	1995
	fluoroethane			
58-90-2	2,3,4,6-Tetrachlorophenol	С		1991
	Tetrachlorvinphos			1990
64-75-5	Tetracycline hydrochloride		313	1995
78-00-2	Tetraethyl lead	С		1991
107-49-3	Tetraethyl pyrophosphate	С		1991
3689-24-5	Tetraethyldithiopyrophosphate	С		1992
533-74-4	Tetrahydro-3,5-dimethyl-2H-1,3,5-		X	1995
	thiadiazine-2-thione			
53404-60-7	Tetrahydro-3,5-dimethyl-2H-1,3,5-		X	1995
	thiadiazine-2-thione, ion(1-),			
	sodium			
67485-29-4	Tetrahydro-5,5-dimethyl-2(1H)-	X	199	
	pyrimidinone(3-(4-		5	
	(trifluoromethyl)phenyl)-1-(2-(4-			
	(trifluoromethyl)phenyl)ethenyl)-			
	2-propenylidene)hydrazone			
	Tetramethrin			1995
39515-41-8	2,2,3,3-Tetramethylcyclopropane		X	1995
	carboxylic acid cyano(3-			
	phenoxyphenyl)methyl ester	_		
	Tetranitromethane	С		1992
	Thallic oxide	С		1992
7440-28-0	Thallium	С	313	1990

CAS	NAME	C	313	ADD
7791-12-0	Thallium chloride TICI	С	*	1993
1038	Thallium Compounds	С	313	
10031-59-1	Thallium sulfate	С		1993
563-68-8	Thallium(I) acetate	С	*	1992
6533-73-9	Thallium(I) carbonate	С	*	1992
	Thallium(I) nitrate	С		1993
	Thallium(I) sulfate	С		1992
6533-73-9	Thallous carbonate	С		1992
7791-12-0	Thallous chloride	С		1993
7446-18-6	Thallous sulfate	С	*	1992
148-79-8	Thiabendazole		313	1995
148-79-8	2-(4-Thiazolyl)-1H-benzimidazole		X	1995
62-55-5	Thioacetamide	С	313	1990
28249-77-6	Thiobencarb		313	1995
139-65-1	4,4'-Thiodianiline		313	1990
59669-26-0	Thiodicarb		313	1995
39196-18-4	Thiofanox	С		1993
74-93-1	Thiomethanol	С	X	1991
297-97-2	Thionazin	С		1992
1634-02-2	Thioperoxydicarbonic diamid,	С		
	tetrabutyl (tetrabutylthiuram			
	disulfide)			
97-77-8	Thioperoxydicarbonic	С		
	diamide,tetraethyl (Disulfiram)			
	Thiophanate ethyl		313	
	Thiophanate-methyl		313	1995
	Thiophenol	С		1991
79-19-6	Thiosemicarbazide	С	313	1991

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CAS	NAME	C		ADD
	Thiourea	C		1990
	Thiourea, (2-chlorophenyl)-	C		1992
	Thiourea, 1-naphthalenyl-	C		1991
137-26-8		С	212	1991
	Thorium dioxide	<u> </u>		1990
	Titanium chloride (TiCl4) (T-4)-	С	X	1990
	Titanium tetrachloride	С		1990
	Toluene	C		1990
	Toluene diisocyanate	С	X	1990
2047 1-02-3	(unspecified isomer)	C	^	
591 91 O	Toluene-2,4-diisocyanate	С	212	1990
	Toluene-2,6-diisocyanate	C		1990
	Toluenediamine	С	X	1990
	Toluenediisocyanate (mixed	С		1990
2047 1-02-3	isomers)	C	313	1990
8001-35-2	Toxaphene	С	313	1990
	2,4,5-TP esters	С	313	1993
	trans-1,3-Dichloropropene		212	1995
	trans-1,4-Dichloro-2-butene			1995
	trans-1,4-Dichlorobutene		X	1995
	Triadimefon			1995
2303-17-5				1995
	Triaziquone			1990
				1995
	Tribenuron methyl Tribromomethane	С	X	1990
		C		
	Tributyltin fluoride			1995
	Tributyltin methacrylate	_		1995
ე∠-68-6	Trichlorfon	С	513	1990

CAS		NAME	C	313	ADD
		Trichloroacetyl chloride		313	1995
	120-82-1	1,2,4-Trichlorobenzene	С	313	1990
	71-55-6	1,1,1-Trichloroethane	С	313	1990
		1,1,2-Trichloroethane	С	313	1990
	79-01-6	Trichloroethylene	С	313	1990
	75-69-4	Trichlorofluoromethane	С	313	1991
	594-42-3	Trichloromethanesulfenyl	С	X	1992
		chloride			
		Trichloromonofluoromethane	С	X	1991
25	167-82-2	Trichlorophenol	С	*	
(933-75-5	2,3,6-Trichlorophenol	С		1992
	95-95-4	2,4,5-Trichlorophenol	С	313	1990
	88-06-2	2,4,6-Trichlorophenol	С	313	1990
(609-19-8	3,4,5-Trichlorophenol	С	*	1992
159	950-66-0	2,3,4-Trichlorophenol	C	*	1993
,	933-78-8	2,3,5-Trichlorophenol	С	*	1332
	96-18-4	1,2,3-Trichloropropane		313	1995
		Triclopyr triethylammonium salt		313	1995
27	323-41-7	Triethanolamine dodecylbenzene	C		1993
		sulfonate			
		Triethylamine	С		1991
698	306-50-4	2-(4-(5-(Trifluoromethyl)-2-		X	1995
		pyridinyl]oxy]-			
		phenoxy)propanoic acid, butyl			
		ester			
		Trifluralin	С		1990
26		Triforine		313	1995
	75-50-3	Trimethylamine	C		1991

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CAS	NAME	C	313	ADD
95-63-6	1,2,4-Trimethylbenzene		313	1990
16938-22-0	2,2,4-Trimethylhexamethylene		313	1995
	diisocyanate		*	
15646-96-5	2,4,4-Trimethylhexamethylene		313	1995
	diisocyanate		*	
	2,2,4-Trimethylpentane	С		
540-84-1	2,2,4-Trimethylpentane	С		
2655-15-4	2,3,5-Trimethylphenyl		313	1995
	methylcarbamate			
99-35-4	1,3,5-Trinitrobenzene	C		1991
639-58-7	Triphenyltin chloride		313	1995
76-87-9	Triphenyltin hydroxide		313	1995
126-72-7	Tris(2,3-dibromopropyl)	С	313	1990
	phosphate			
14484-64-1	Tris(dimethylcarbamodithioato-		X	1995
	S,S')iron			
72-57-1	Trypan blue	С	313	1991
13560-99-1	2,4,5-T salts	С		1993
66-75-1	Uracil mustard	С		1991
541-09-3	Uranyl acetate	С		1992
10102-06-4	Uranyl nitrate	С	*	1993
36478-76-9	Uranyl nitrate	С	*	1993
2164-17-2	Urea, N,N-dimethyl-N'-[3-		X	
	(trifluoromethyl)phenyl]-			
51-79-6	Urethane	С	313	1990
	Vanadium (except when in alloy)		313	1990
1314-62-1	Vanadium pentoxide	С		1992
	Vanadium Compounds		313	

CAS	NAME	C	313	ADD
			0	
27774-13-6	Vanadyl sulfate	С		1993
2699-79-8			X	1995
50471-44-8	Vinclozolin		313	1995
	Vinyl acetate	С	313	1990
108-05-4	Vinyl acetate monomer	С	X	1990
	Vinyl bromide	С		1990
75-01-4	Vinyl chloride	С	313	1990
75-35-4	Vinylidene chloride	С	313	1990
81-81-2	Warfarin	С	X *	1991
	Warfarin and salts		313	
	Warfarin, & salts, conc.>0.3%	С	X *	1991
1330-20-7	Xylene (mixed isomers)	С	313	1990
1300-71-6		С		1992
	2,6-Xylidine		313	1990
	Zinc (fume or dust)	С	313	1990
	Zinc acetate	С	*	1332
14639-97-5	Zinc ammonium chloride	С	*	1993
14639-98-6	Zinc ammonium chloride	C C	*	133
52628-25-8	Zinc ammonium chloride	С	*	1993
	Zinc borate	С		1992
7699-45-8	Zinc bromide	С	*	1993
	Zinc carbonate	С	*	1992
7646-85-7	Zinc chloride	С	*	1993
	Zinc Compounds	С	313	
	Zinc cyanide	С	*	1992
7783-49-5	Zinc fluoride	C C	*	1993
557-41-5	Zinc formate	С	*	1992

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CAS	NAME	C	313	ADD
7779-86-4	Zinc hydrosulfite	С	*	1993
7779-88-6	Zinc nitrate	С	*	1993
127-82-2	Zinc phenolsulfonate	C	*	1991
1314-84-7	Zinc phosphide	C		1992
1314-84-7	Zinc phosphide (conc. <= 10%)	C		1992
1314-84-7	Zinc phosphide (conc. > 10%)	C		1992
16871-71-9	Zinc silicofluoride	C	*	1993
7733-02-0	Zinc sulfate	С		1993
14324-55-1	Zinc,	C	*	
	bis(diethylcarbamodithioato-S,S)-			

CAS	NAME	C	313	ADD
	(ethyl ziram)			
137-30-4	Zinc,	С	*	
	bis(dimetylcarbomodithioato-			
	S,S)-, (ziram)			
12122-67-7	Zineb		313	1990
13746-89-9	Zirconium nitrate	С	*	1993
16923-95-8	Zirconium potassium fluoride	С		1993
14644-61-2	Zirconium sulfate	С		1993
10026-11-6	Zirconium tetrachloride	С		1993

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				Sorted Numer	cany by CAS				
CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
	1000 Antimony Compounds	С	313		102	6 Lead Compounds	С	313	
	1001 Arsenic Compounds	С	313		102	7 Manganese Compounds	С	313	
	1002 Barium Compounds	•	313		102	8 Mercury Compounds	С	313	
	1003 Beryllium Compounds	С	313			9 Nickel Compounds	С	313	
	1004 Cadmium Compounds	С	313		103	0 Nitrophenols	С		
	1005 Chlordane (Technical Mixture) C			103	1 Nitrosamines	С		
	and Metabolites)				103	3 Phthalate Esters	С		
	1006 Chlorinated Benzenes	С			103	4 Polybrominated Biphenyls		313	
	1007 Chlorinated Ethanes	С				(PBBs)			
	1008 Chlorinated Naphthalene	С			103	5 Polynuclear Aromatic	С		
	1011 Chloroalkyl Ethers	С				Hydrocarbons			
	1009 Chlorophenols	С	313		103	6 Selenium Compounds	С	313	
	1012 Chromium Compounds	С	313		103	7 Silver Compounds	С	313	
	1013 Cobalt Compounds	С	313		103	8 Thallium Compounds	С	313	
	1014 Coke Oven Emissions	С			103	9 Zinc Compounds	С	313	
	1015 Copper Compounds	С	313		104	0 Polycyclic aromatic		313	
	1016 Cyanide Compounds	С	313			compounds (includes only 21			
	1017 DDT and Metabolites	С				chemicals)			
	1018 Dichlorobenzidine	С				Polycyclic organic matter	С		
	1019 Diphenylhydrazine	С				Polycyclic Organic Matter (e)	С		
	1020 Endosulfan and Metabolites	С			104	5 Polychlorinated alkanes (C10		313	
	1021 Endrin and Metabolites	С				to C13)			
	Fine mineral fibers	С			105	Diisocyanates (includes only		313	
	Fine mineral fibers (c)	С				20 chemicals)			
	1022 Glycol Ethers	С	313			5 Nicotine and salts	С	313	1991
	1023 Haloethers	С			106	0 Dioxin and Dioxin like		313	
	1024 Halomethanes	С				Compounds			
	HCFC-141b	Х				5 Vanadium Compounds		313	
	1025 Heptachlor and Metabolites	С			107	0 Strychnine, and salts	С	313	1991

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CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
1075	Warfarin and salts		N874		52-68-6	Phosphonic acid, (2,2,2-	С	Х	
1090	Nitrate compounds (water		N511			trichloro-1-hydroxyethyl)-			
	dissociable)					,dimethyl ester			
1095	Silica, crystalline (respirable, <	:		2002	52-68-6	Trichlorfon	С	313	1990
	10 microns)				52-85-7	Famphur	С	313	1991
	Picloram		313	1995		Dibenz[a,h]anthracene	С	313*	1991
30-59-3	Tributyltin fluoride		313	1995		2-Acetylaminofluorene	С	313	1990
	Formaldehyde	С	313	1990		Nicotine	С	*	1991
	Formaldehyde (solution)	С	Χ		54-11-5	Pyridine, 3-(1-methyl-2-	С		1991
50-07-7	Mitomycin C	С		1991		pyrrolidinyl)-,(S)-			
50-18-0	Cyclophosphamide	С		1991		N-Nitrosodiethylamine	С	313	
50-29-3	DDT	С				Benzamide		313	1990
50-32-8	Benzo[a]pyrene	С	313*	1991		Fenthion		313	1995
50-55-5	Reserpine	С		1991	55-38-9	O,O-Dimethyl O-(3-methyl-4-		X	1995
	Piperonyl butoxide		313	1995		(methylthio) phenyl) ester,			
51-21-8	5-Fluorouracil		X			phosphorothioic acid			
51-21-8	Fluorouracil		313	1995		Nitroglycerin	С	313	
51-28-5	2,4-Dinitrophenol	С	313	1990		Diisopropylfluorophosphate	С		1991
51-43-4	Epinephrine	С		1991	55-91-4	Isofluorphate	С		
51-75-2	2-Chloro-N-(2-chloroethyl)-N-		X	1990	56-04-2	Methylthiouracil	С		1991
	methylethanamine				56-23-5	Carbon tetrachloride	С	313	
51-75-2	Mechlorethamine		X	1990		Bis(tributyltin) oxide		313	1995
51-75-2	Nitrogen mustard		313	1990		Parathion	С	313	1990
51-79-6	Carbamic acid, ethyl ester	С	Х	1990	56-38-2	Phosphorothioic acid, O,O-	С	Χ	1990
51-79-6	Ethyl carbamate	С	Х	1990		diethyl-O-(4-nitrophenyl) ester			
51-79-6	Urethane	С	313			3-Methylcholanthrene	С	*	1991
52-51-7	Bronopol		X			Diethylstilbestrol	С		1991
						Benz[a]anthracene	С	313*	
					56-72-4	Coumaphos	С		1991

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CAC NAME	•		orted Numer		ADD
CAS NAME	C	313	ADD	CAS NAME C 313	ADD
57-12-5 Cyanides (soluble salts and	С		1991	58-90-2 2,3,4,6-Tetrachlorophenol C	* 1991
complexes)		040	4000	59-50-7 p-Chloro-m-cresol C	1991
57-14-7 1,1-Dimethyl hydrazine	С	313	1990	59-89-2 N-Nitrosomorpholine C 31	
57-14-7 Dimethylhydrazine	С	X	1990	60-00-4 Ethylenediamine-tetraacetic C	1991
57-14-7 Hydrazine, 1,1-dimethyl-	С	X	1990	acid (EDTA)	
57-24-9 Strychnine	С	*	1991	60-09-3 4-Aminoazobenzene 31	
57-33-0 Pentobarbital sodium		313	1995	60-11-7 4-Dimethylaminoazobenzene C 31	
57-41-0 Phenytoin		313	1995	60-11-7 Dimethylaminoazobenzene C X	1990
57-47-6 Pyrrolo[2,3-b] indol-5-ol,	С			60-29-7 Ethane, 1,1'-oxybis- C	1991
1,2,3,3a,8,8a-hexahydro-				60-29-7 Ethyl ether C	1991
1,3a,8-trimethyl-,				60-34-4 Hydrazine, methyl- C X	
methylcarbamate (ester),				60-34-4 Methyl hydrazine C 31	1990
(3aS-cis)-(Physostigmine)				60-35-5 Acetamide C 31	1990
57-57-8 beta-Propiolactone	С	313	1990	60-51-5 Dimethoate C 31	3 1991
57-64-7 Benzoic Acid	С			60-57-1 Dieldrin C	1991
(Physostigminesalicylate)				61-82-5 Amitrole C 31	3 1991
57-74-9 4,7-Methanoindan,	С	Χ		62-38-4 Phenylmercuric acetate C	1991
1,2,3,4,5,6,7,8,8-octachloro-				62-38-4 Phenylmercury acetate C	1991
2,3,3a,4,7,7a-hexahydro-				62-44-2 Phenacetin C	1991
57-74-9 Chlordane	С	313	1990	62-50-0 Ethyl methanesulfonate C	1991
57-97-6 7,12-	С	313*	1991	62-53-3 Aniline C 31	
Dimethylbenz[a]anthracene				62-55-5 Thioacetamide C 31	
58-89-9 Cyclohexane, 1,2,3,4,5,6-	С	X	1990	62-56-6 Thiourea C 31	
hexachloro-				62-73-7 Dichlorvos C 31	
,(1.alpha.,2.alpha.,3.beta.,4.al				62-73-7 Phosphoric acid, 2- C X	1990
pha.,5.alpha.,6.beta.)-				dichloroethenyl dimethyl ester	1330
58-89-9 Hexachlorocyclohexane	С	X	1990	62-74-8 Fluoroacetic acid, sodium salt C X	1991
(gamma isomer)				62-74-8 Sodium fluoroacetate C 31	
58-89-9 Lindane	С	313	1990	02-74-0 Socialitificoroacetate C 31	ופפו וכ

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CAS	NAME	C		ADD	CAS	NAME	C	313	ADD
62-75-9	Methanamine, N-methyl-N-	С	X	1990	68-76-8 2,5	5-Cyclohexadiene-1,4-		X	1990
	nitroso-					one, 2,3,5-tris(1-aziridinyl)-			
62-75-9	Nitrosodimethylamine	С	X	1990	68-76-8 Tri			313	1990
	N-Nitrosodimethylamine	С	313			uanidine, N-methyl-N'-nitro-	С		1991
63-25-2	1-Naphthalenol,	С	X	1990		nitroso-			
	methylcarbamate				70-30-4 He	exachlorophene	С	313	1991
63-25-2	Carbaryl	С	313	1990		Butyl alcohol	С	313	1990
					71-43-2 Be	enzene	С		313
						1,1-Trichloroethane	С		313
64-00-6	Phenol, 3-(1-methylethyl)-,	С				ethyl chloroform	С	Χ	1990
	methyl carbamate (m-				72-20-8 En	ndrin	С		1991
	Cumenyl methylcarbamate)				72-43-5 Be	enzene, 1,1'-(2,2,2-	С	X	1990
	Formic acid	С	313			chloroethylidene)bis [4-			
64-19-7	Acetic acid (concentrations of	С		1991		ethoxy-			
	12% or less are NOT					ethoxychlor	С	313	
	reportable)				72-54-8 DD		С		1991
	Diethyl sulfate	С	313		72-55-9 DD		С		1991
	Tetracycline hydrochloride		313		72-57-1 Try	ypan blue	С	313	1991
	Benzoic acid	С		1991	74-83-9 Bro	omomethane	С	313	1990
	Uracil mustard	С		1991		ethyl bromide	С	X	1990
	Methanol	С	313		74-85-1 Eth	hene		X	1990
67-63-0	Isopropyl alcohol (mfg-strong		313	1990	74-85-1 Eth	hylene		313	1990
	acid process)				74-87-3 Ch	nloromethane	С	313	1990
	Acetone	С			74-87-3 Me	ethane, chloro-	С	Χ	1990
	Chloroform	С	313		74-87-3 Me	ethyl chloride	С	Χ	1990
	Methane, trichloro-	С	X	1990		ethyl iodide	С	313	1990
	Hexachloroethane	С	313	1990		ethanamine	С		1991
	Dimethylformamide	С	X		74-89-5 Mc	onomethylamine	С		1991
68-12-2	N,N-Dimethylformamide	С	313	1995		/drocyanic acid	С	X	1990

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_CAS NAME	C	313	ADD	 CAS	NAME	C	31	3	ADD
74-90-8 Hydrogen cyanide	С	313	1990		Acetyl chloride	С			1991
74-93-1 Methanethiol	С	X	1991	75-43-4	Dichlorofluoromethane			313	
74-93-1 Methyl mercaptan	С	313	1991	75-43-4	HCFC-21		Х		
74-93-1 Thiomethanol	С	X	1991	75-44-5	Carbonic dichloride	С	Х		1990
74-95-3 Methylene bromide	С	313	1990	75-44-5	Phosgene	С		313	1990
75-00-3 Chloroethane	С	313	1990	75-45-6	Chlorodifluoromethane			313	
75-00-3 Ethane, chloro-	С	Χ	1990	75-45-6	HCFC-22			Χ	
75-00-3 Ethyl chloride	С	Χ	1990	75-50-3	Methanamine, N,N-dimethyl-	С			1991
75-01-4 Ethene, chloro-		Χ	1990	75-50-3	Trimethylamine	С			1991
75-01-4 Vinyl chloride	С	313	1990	75-55-8	Aziridine, 2-methyl	С	Х		1990
75-04-7 Ethanamine	С		1991	75-55-8	Propyleneimine	С		313	
75-04-7 Monoethylamine	С		1991	75-56-9	Oxirane, methyl-	С	X		1990
75-05-8 Acetonitrile	С	313	1990		Propylene oxide	С		313	1990
75-07-0 Acetaldehyde	С	313		75-60-5	Cacodylic acid	С			1991
75-09-2 Dichloromethane	С	313	1990	75-63-8	Bromotrifluoromethane			313	1991
75-09-2 Methylene chloride	С	X	1990	75-63-8	Halon 1301		X		1991
75-15-0 Carbon disulfide	С	313	1990	75-64-9	tert-Butylamine	С			1991
75-20-7 Calcium carbide	С		1991	75-65-0	tert-Butyl alcohol			313	1990
75-21-8 Ethylene oxide	С	313	1990	75-68-3	1-Chloro-1,1-difluoroethane			313	
75-21-8 Oxirane	С	X	1990	75-68-3	HCFC-142b		X		
75-25-2 Bromoform	С	313	1990	75-69-4	CFC-11	С	Х		
75-25-2 Tribromomethane	С	Χ	1990	75-69-4	Trichlorofluoromethane	С		313	1991
75-27-4 Dichlorobromomethane	С	313	1990	75-69-4	Trichloromonofluoromethane	С	X		
75-34-3 1,1-Dichloroethane	С	X	1991	75-71-8	CFC-12	С	Х		
75-34-3 Ethylidene Dichloride	С	313	1991	75-71-8	Dichlorodifluoromethane	С		313	
75-35-4 1,1-Dichloroethylene	С	X	1990	75-72-9	CFC-13		X		1995
75-35-4 Ethene, 1,1-dichloro-	С	X	1990	75-72-9	Chlorotrifluoromethane			313	1995
75-35-4 Vinylidene chloride	С	313	1990	75-77-4	Silane, chlorotrimethyl-		Х		1995

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CAS	NAME	C	313	ortea Numer ADD	CAS	NAME	C	313	ADD
	Silane, dichlorodimethyl-		X	1995		S,S,S-Tributyltrithiophosphate		313	1995
	Silane, trichloromethyl-		X	1995		Isophorone	С	313	1333
	2-Methyllactonitrile	С	313	1991		1,3-Butadiene, 2-methyl-	С		1991
	Acetone cyanohydrin	C	X	1991		Isoprene	С		1991
	Acetaldehyde, trichloro-	C	^			iso-Butylamine	С		1991
	•	C	242	1995			С		1991
	2-Chloro-1,1,1-trifluoroethane		313			Isobutyl alcohol	C	040	4000
	HCFC-133a		X	1995		Isobutyraldehyde	_	313	1990
	· · · · · · · · · · · · · · · · · · ·	С	0.40	1991		1,2-Dichloropropane	С	313	1990
		С	313	1991		Propane 1,2-dichloro-	С	Х	1990
	Trichloroacetyl chloride		313			2,3-Dichloropropene	С	313	1990
	Chloropicrin		313			sec-Butyl alcohol		313	1990
76-13-1	Ethane, 1,1,2-trichloro-1,2,2,-		X	1990		Methyl ethyl ketone	С	313	
	trifluoro-	1				Methyl ethyl ketone (MEK)	С	Х	1990
	Freon 113		313		78-99-9	1,1-Dichloropropane	С		1991
	CFC-114		X	1991	79-00-5	1,1,2-Trichloroethane	С	313	1990
76-14-2	Dichlorotetrafluoroethane		313	1991	79-01-6	Trichloroethylene	С	313	
76-15-3	CFC-115		X		79-06-1	Acrylamide	С	313	1990
76-15-3	Monochloropentafluoroethane		313	1991	79-09-4	Propionic acid	С		1991
76-44-8	1,4,5,6,7,8,8-Heptachloro-	С	Χ	1990	79-10-7	Acrylic acid	С	313	1990
	3a,4,7,7a-tetrahydro-4,7-					Chloroacetic acid	С	313	1990
	methano-1H-indene				79-19-6	Thiosemicarbazide	С	313	1991
76-44-8	Heptachlor	С	313	1990	79-21-0	Ethaneperoxoic acid		X	1990
76-87-9	Triphenyltin hydroxide		313	1995		Peracetic acid		313	1990
		С	313	1990		Carbonochloridic acid,	С	Х	1991
	Dicyclopentadiene		313			methylester			
	Dimethyl sulfate	С	313	1990		Methyl chlorocarbonate	С	313	1991
	Tetraethyl lead	С		1991		methyl chloroformate	C	X	1991
78-48-8	,		X			iso-Butyric acid	C	, ,	
	1				.0012	100 2017110 0010			

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CAS NAME	C	313	ADD	CAS	NAME	C	313	ADD
79-34-5 1,1,2,2-Tetrachloroethane		313		86-50	-0 Azinphos-methyl	С		1991
79-44-7 Dimethylcarbamyl chloride		313	1990	86-50	-0 Guthion	С		1991
79-46-9 2-Nitropropane	С	313	1990	86-73	-7 Fluorene	С		1991
79-94-7 Tetrabromobisphenol A		313		86-88	-4 Antu	С		1991
80-05-7 4,4'-Isopropylidenediphene	ol	313	1990	86-88	-4 Thiourea, 1-naphthalenyl-	С		1991
80-15-9 Cumene hydroperoxide	С	313	1990	87-62	-7 2,6-Xylidine		313	1990
80-15-9 Hydroperoxide, 1-methyl-1	1- C	Χ	1990	87-65	-0 2,6-Dichlorophenol	С	*	1991
phenylethyl-				87-68	-3 Hexachloro-1,3-butadiene	С	313	1990
80-62-6 Methyl methacrylate	С	313	1990	87-68	-3 Hexachlorobutadiene	С	X	1990
81-07-2 Saccharin (manufacturing)) C	313	1991	87-86	-5 PCP	С	Х	1990
81-07-2 Saccharin and salts	С			87-86	-5 Pentachlorophenol	С	313	
81-81-2 Warfarin	С	X*	1991	88-06	-2 2,4,6-Trichlorophenol	С	313	1990
81-81-2 Warfarin, & salts, conc.>0	.3% C	N874	1991	88-72	-2 o-Nitrotoluene	С		1991
81-88-9 C.I. Food Red 15		313	1990	88-75	-5 2-Nitrophenol	С	313	1990
82-28-0 1-Amino-2-		313	1990	88-85	7 Dinitrobutyl phenol	С	313	1991
methylanthraquinone				88-85	7 Dinoseb	С	Х	1991
82-68-8 PCNB	С	Χ	1990	88-89	-1 Picric acid		313	1990
82-68-8 Pentachloronitrobenzene	С	Χ	1990	90-04	-0 o-Anisidine	С	313	1990
82-68-8 Quintozene	С	313	1990	90-43	7 2-Phenylphenol		313	1990
83-32-9 Acenaphthene	С			90-94	-8 Michler's ketone		313	1990
84-66-2 Diethyl phthalate	С	313		91-08	7 Benzene, 1,3-diisocyanato-2-	С	Х	1990
84-74-2 Dibutyl phthalate	С	313	1990		methyl-			
84-74-2 n-Butyl phthalate	С	Χ	1990	91-08	7 Toluene-2,6-diisocyanate	С	313	1990
85-00-7 Diquat	С		1991	91-20	-3 Naphthalene	С	313	1990
85-01-8 Phenanthrene	С	313	1991	91-22	-5 Quinoline	С	313	
85-44-9 Phthalic anhydride	С	313	1990	91-58	-7 2-Chloronaphthalene	С		
85-68-7 Butyl benzyl phthalate	С		1990	91-59	-8 beta-Naphthylamine	С	313	1990
86-30-6 N-Nitrosodiphenylamine	С	313	1990	91-66	7 N,N-Diethylaniline	С		

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CAS NA	AME	C	313	ADD	CAS		NAME	C	313	ADD
		C		1122		9-1	2,4-D Esters	C		1991
		C		1991			2,4-D butyl ester	С	313	
	3'-Dimethoxybenzidine-4,4'-		313*	1995			2,4-D Esters	C	X	1991
	isocyanate		0.0	.000			2,4-DB		313	
		С	313	1990			Carbamodithioic acid, diethyl-,	С		1000
	3'-Dimethyl-4,4'-diphenylene		313*	1995			2-chloro-2-propenyl			
·	isocyanate						ester(sulfallate)			
92-52-4 Bip		С	313	1990	95-4		Benzene, o-dimethyl-	С	X	1990
		С	313	1990			o-Xylene	С	313	1990
92-87-5 Be		С	313				o-Cresol	С	313	1990
92-93-3 4-1	Nitrobiphenyl	С	313	1990	95-5	0-1	1,2-Dichlorobenzene	С	313	1990
93-65-2 Me			313				o-Dichlorobenzene	С	Х	1990
93-72-1 Sil	lvex (2,4,5-TP)	С		1991	95-5	3-4	o-Toluidine	С	313	1990
93-76-5 2,4		С		1991	95-5	4-5	1,2-Phenylenediamine	313	1995	5
93-79-8 2,4	4,5-T esters	С		1991			2-Chlorophenol	С	,	1991
94-11-1 2,4		С	Χ	1991	95-6	3-6	1,2,4-Trimethylbenzene		313	1990
94-11-1 2,4	4-D isopropyl ester	С	313	1991			p-Chloro-o-toluidine		313	1995
	enzoyl peroxide		313	1990	95-8	0-7	2,4-Diaminotoluene	С	313	1990
94-58-6 Dil	hydrosafrole	С	313	1991	95-9	4-3	1,2,4,5-Tetrachlorobenzene	С		
94-59-7 Sa	afrole	С	313	1990			2,4,5-Trichlorophenol	С	313	1990
94-74-6 (4-	-Chloro-2-methylphenoxy)		Χ	1995	96-0	9-3	Styrene oxide	С	313	3
àc	cetic acid				96-1	2-8	1,2-Dibromo-3-chloropropane	С	313	3
94-74-6 MC	СРА		Χ	1995	96-1	2-8	DBCP	С	Χ	1990
94-74-6 Me	ethoxone		313		96-1	8-4	1,2,3-Trichloropropane		313	1995
94-75-7 2,4	4-D	С	313	1990			Methyl acrylate		313	1990
94-75-7 2,4	4-D Acid	С	X	1990			Ethylene thiourea	С	313	1990
94-75-7 2,4	4-D, salts and esters	С					2,2'-Methylenebis(4-		Х	1995
94-75-7 Ac	cetic acid, (2,4-	С	Χ	1990			chlorophenol			
dic	chlorophenoxy)-							•	•	-

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97-56-3 C	Dichlorophene C.I. Solvent Yellow 3		5					
	L Solvent Vellow 3		313	1995	100-25-4 p-Dinitrobenzene	С	313	1990
97-63-2 E	7.1. Sulvetil Tellow 3		313	1990	100-41-4 Ethylbenzene	С	313	1990
J	thyl methacrylate	С			100-42-5 Styrene	С	313	
97-74-5 B	Bis(dimethylthiocarbamoyl)	С			100-44-7 Benzyl chloride	С	313	1990
SI	sulfide				100-47-0 Benzonitrile	С		1991
(t	tetramethylthiurammonosulfid				100-75-4 N-Nitrosopiperidine	С	313	1990
e)	2)				101-05-3 4,6-Dichloro-N-(2-		X	1995
97-77-8 T	hioperoxydicarbonic	С			chlorophenyl)-1,3,5-triazin-2-			
	liamide,tetraethyl (Disulfiram)				amine			
98-01-1 F		С			101-05-3 Anilazine		313	1995
		С	313		101-14-4 4,4'-Methylenebis(2-	С	313	
98-07-7 B		С	X	1990	chloroaniline)			
	,	С		1991	101-14-4 MBOCA	С	X	1990
98-82-8 C		С	313	1990	101-27-9 Carbamic, (3-chlorophenyl)-	С		
		С	313	1991	,4-chloro-2-butynyl			
98-87-3 B		С	313	1990	ester(barban)			
98-88-4 B	Benzoyl chloride	С	313	1990		С		
98-95-3 N		С	313	1990	101-61-1 4,4'-Methylenebis(N,N-		313	1990
99-08-1 m	n-Nitrotoluene	С		1991	dimethyl)benzenamine			
99-30-9 2	2,6-Dichloro-4-nitroaniline		Χ	1995	101-68-8 MDI	С	X*	1990
99-30-9 D	Dichloran		313	1995	101-77-9 4,4'-Methylenedianiline	С	313	
99-35-4 1	, ,	С		1991	101-80-4 4,4'-Diaminodiphenyl ether		313	1990
99-55-8 5	5-Nitro-o-toluidine	С	313	1991	101-90-6 Diglycidyl resorcinol ether		313	1995
99-59-2 5	5-Nitro-o-anisidine		313	1990	103-85-5 Phenylthiourea	С		1991
99-65-0 m	n-Dinitrobenzene	С	313		104-12-1 p-Chlorophenyl isocyanate		313	1995
99-99-0 p	-Nitrotoluene	С		1991	104-49-4 1,4-Phenylene diisocyanate		313*	1995
100-01-6 p	o-Nitroaniline	С	313	1991	104-94-9 p-Anisidine		313	1990
100-02-7 4	-Nitrophenol	С	313	1990	105-46-4 sec-Butyl acetate	С		1991
100-02-7 p	o-Nitrophenol	С	Χ		105-67-9 2,4-Dimethylphenol	С	313	1990

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CAS NAME	C	313	ADD	_	CAS	NAME	C	313	ADD
106-42-3 Benzene, p-dimethyl-	С	X	1990			1,2-Ethanediamine	С		1991
106-42-3 p-Xylene	С	313	1990		107-15-3	Ethylenediamine	С		1991
106-44-5 p-Cresol	С	313	1990		107-18-6	2-Propen-1-ol	С	X	1990
106-46-7 1,4-Dichlorobenzene	С	313	1990		107-18-6	Allyl alcohol	С	313	1990
106-47-8 p-Chloroaniline	С	313	1991			Propargyl alcohol	С	313	1991
106-49-0 p-Toluidine	С		1991		107-20-0	Chloroacetaldehyde	С		1991
106-50-3 p-Phenylenediamine	С	313	1990		107-21-1	Ethylene glycol	С	313	1990
106-51-4 p-Benzoquinone	С	X	1990		107-30-2	Chloromethyl methyl ether	С	313	1990
106-51-4 Quinone	С	313	1990		107-30-2	Methane, chloromethoxy-	С	X	1990
106-88-7 1,2-Butylene oxide	С	313	1990		107-49-3	Терр	С		1991
106-89-8 Epichlorohydrin	С	313	1990		107-49-3	Tetraethyl pyrophosphate	С		1991
106-89-8 Oxirane, (chloromethyl)-	С	X	1990		107-92-6	Butyric acid	С		1991
106-93-4 1,2-Dibromoethane	С	313	1990		108-05-4	Acetic acid ethenyl ester	С	X	1990
106-93-4 Ethylene dibromide	С	Х	1990		108-05-4	Vinyl acetate	С	313	1990
106-99-0 1,3-Butadiene	С	313	1990		108-05-4	Vinyl acetate monomer	С	X	1990
107-02-8 2-Propenal	С	X	1990			Methyl isobutyl ketone	С	313	1990
107-02-8 Acrolein	С	313	1990		108-24-7	Acetic anhydride	С		1991
107-05-1 Allyl chloride	С	313			108-31-6	Maleic anhydride	С	313	
107-06-2 1,2-Dichloroethane	С	313	1990		108-38-3	Benzene, m-dimethyl-	С	X	1990
107-06-2 Ethylene dichloride	С	X	1990		108-38-3	m-Xylene	С	313	1990
107-10-8 n-Propylamine	С		1991		108-39-4	m-Cresol	С	313	1990
107-11-9 2-Propen-1-amine		X			108-45-2	1,3-Phenylenediamine		313	1995
107-11-9 Allylamine		313	1995			Resorcinol	С		1991
107-12-0 Ethyl cyanide	С		1991		108-60-1	Bis(2-chloro-1-	С	313	
107-12-0 Propanenitrile	С		1991			methylethyl)ether			
107-12-0 Propionitrile	С		1991		108-60-1	Dichloroisopropyl ether	С	X	1990
107-13-1 2-Propenenitrile	С	Х	1990		108-88-3		С	313	1990
107-13-1 Acrylonitrile	С	313	1990		108-90-7	Chlorobenzene	С	313	1990

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					ically by CAS				
CAS	NAME	C		ADD	CAS	NAME	C	313	ADD
	Cyclohexanol		313	1995	111-54-6	Ethylenebisdithiocarbamic	С		1991
	Cyclohexanone	С		1991		acid, salts & esters			
108-95-2		С	313	1990		Bis(2-chloroethoxy) methane	С	313	1991
108-98-5	Benzenethiol	С		1991	114-26-1	Phenol, 2-(1-methylethoxy)-,	С	X	1990
108-98-5	Thiophenol	С		1991		methylcarbamate			
109-06-8	2-Methylpyridine	С	313			Propoxur	С	313	
109-06-8	2-Picoline	С	X	1991	115-02-6	Azaserine	С		1991
109-73-9	Butylamine	С		1991	115-07-1	1-Propene		X	1990
109-77-3	Malononitrile	С	313	1991		Propene		Χ	1990
109-86-4	2-Methoxyethanol		313	1990	115-07-1	Propylene		313	1990
109-89-7	Diethylamine	С		1991	115-28-6	Chlorendic acid		313	1995
109-99-9	Furan, tetrahydro-	С		1991	115-29-7	'Endosulfan	С		1991
110-00-9	Furan	С		1991	115-32-2	Benzenemethanol, 4-chloro-	С	X	1990
110-16-7	Maleic acid	С				.alpha4-chlorophenyl)-			
110-17-8	Fumaric acid	С				.alpha(trichloromethyl)-			
110-19-0	iso-Butyl acetate	С		1991	115-32-2	Dicofol	С	313	1990
110-54-3	Hexane	С	X	1995	116-06-3	Aldicarb	С	313	1991
110-54-3	n-Hexane	С	313	1995	117-79-3	2-Aminoanthraquinone		313	1990
110-57-6	trans-1,4-Dichloro-2-butene		313	1995	117-80-6	Dichlone	С		1991
110-57-6	trans-1,4-Dichlorobutene		Х	1995	117-81-7	Bis(2-ethylhexyl)phthalate	С	X	1990
110-75-8	2-Chloroethyl vinyl ether	С		1991	117-81-7	DEHP	С	Χ	1990
	2-Ethoxyethanol	С	313	1990	117-81-7	Di(2-ethylhexyl) phthalate	С	313	1990
	Ethanol, 2-ethoxy-	С	Х	1990	117-84-0	Di-n-octyl phthalate	С		1990
	Cyclohexane	С	313	1990	117-84-0	n-Dioctylphthalate	С		1990
110-86-1		С	313	1990	118-74-1	Hexachlorobenzene	С	313	1990
	Diethanolamine	С	313	1990	119-38-0	Carbamic acid,dimethyl-, 3-	С		
	Bis(2-chloroethyl) ether	С	313	1990		methyl-1-(1-methylethyl)-1H-			
	Dichloroethyl ether	C	Х	1990		pyrazol-5-yl ester (isolan)			
	, ,		1		119-90-4	3,3'-Dimethoxybenzidine	С	313	1990

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					ric	cally by CAS				
CAS	NAME	C	313	ADD	i i	CAS	NAME	C	313	ADD
	3,3'-Dimethylbenzidine	С	313	1990			Hydroquinone (manufactured	С	313	1990
119-93-7	o-Tolidine	С	Χ				only)			
120-12-7	Anthracene	С	313	1990			Maleic hydrazide	С		
120-36-5	52,4-DP		313	1995		123-38-6	Propionaldehyde	С	313	1990
120-54-7	Piperidine, 1,1-	С				123-61-5	1,3-Phenylene diisocyanate		313*	1995
	(tetrathiodicarbonothioyl)-bis-					123-62-6	Propionic anhydride	С		1991
	(Bis(pentamenthylene)thiuram					123-63-7	Paraldehyde	С	313	1991
	tetrasulfide)					123-72-8	Butyraldehyde		313	1990
120-58-1	Isosafrole	С	313	1990		123-73-9	2-Butenal, (e)-	С		1991
120-71-8	p-Cresidine		313	1990		123-73-9	Crotonaldehyde, (E)-	С		1991
120-80-9	Catechol	С	313	1990		123-86-4	Butyl acetate	С		1991
120-82-1	1,2,4-Trichlorobenzene	С	313	1990		123-91-1	1,4-Dioxane	С	313	1990
120-83-2	2,4-Dichlorophenol	С	313	1990		123-92-2	iso-Amyl acetate	С		1991
121-14-2	2,4-Dinitrotoluene	С	313	1990		124-04-9	Adipic acid	С		
121-21-1	Pyrethrins	С		1991		124-40-3	Dimethylamine	С	313	
121-29-9	Pyrethrins	С		1991		124-40-3	Methanamine, N-methyl-	С	Х	1991
121-44-8	Triethylamine	С	313			124-41-4	Sodium methylate	С		1991
121-69-7	N,N-Dimethylaniline	С	313	1990		124-48-1	Chlorodibromomethane	С		1991
121-75-5	Malathion	С	313	1991		124-73-2	Dibromotetrafluoroethane		313	1991
122-09-8	Benzeneethanamine,	С		1991		124-73-2	Halon 2402		Χ	1991
	alpha,alpha-dimethyl-					126-72-7	Tris(2,3-dibromopropyl)	С	313	1990
122-34-9	Simazine		313	1995			phosphate			
122-39-4	Diphenylamine		313	1995		126-98-7	2-Propenenitrile, 2-methyl-	С	Χ	1991
122-42-9	Carbamic acid, phenyl-, 1-	С					methacrylonitrile	С	313	
	methylethyl ester (propham)						Chloroprene	С	313	
122-66-7	1,2-Diphenylhydrazine	С	313	1990		127-18-4	Perchloroethylene	С	Х	
	Hydrazine, 1,2-diphenyl-	С	X	_			Tetrachloroethylene	С	313	1990
	Hydrazobenzene	С	Χ	1990			Zinc phenolsulfonate	С	*	1991
							1		I	

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CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
128-03-0	Potassium					8 Thiram	С	313	
	dimethyldithiocarbamate		313	1995	137-29-	1 Copper,	С	*	
128-04-1	Sodium dimethyldithiocarbama	te	313	1995		bis(dimethylcarbamodithioato-			
128-66-5	C.I. Vat Yellow 4		313	1990		S-S)-(copper			
129-00-0	Pyrene	С		1991		dimethyldithiocarbamate)			
130-15-4	1,4-Naphthoquinone	С			137-30-	4 Zinc,	С	*	
131-11-3	Dimethyl phthalate	С	313	1990		bis(dimetylcarbomodithioato-			
131-52-2	Sodium pentachlorophenate		313	1995		S,S)-, (ziram)			
131-74-8	Ammonium picrate	С		1991		7 Potassium N-methyldithiocarba	amate		1995
	2-Cyclohexyl-4,6-dinitrophenol	С		1991		8 Metham sodium		313	1995
	Sodium o-phenylphenoxide		313	1995	137-42-	8 Sodium		X	1995
132-64-9	Dibenzofuran	С	313	1990		methyldithiocarbamate			
133-06-2	1H-Isoindole-1,3(2H)-dione,	С	Χ		138-93-	2 Disodium		313	1995
	3a,4,7,7a-tetrahydro-2-					cyanodithioimidocarbonate			
	[(trichloromethyl)thio]-					9 Nitrilotriacetic acid		313	1990
133-06-2		С	313	1990	139-25-			313*	1995
133-07-3	Folpet		313			Dimethyldiphenylmethane-			
133-90-4	Benzoic acid, 3-amino-2,5-	С	Χ	1990		4,4'-diisocyanate			
	dichloro-					1 4,4'-Thiodianiline		313	1990
133-90-4	Chloramben	С	313	1990		5 Ethyl acrylate	С	313	1990
134-29-2	o-Anisidine hydrochloride		313	1990		2 Butyl acrylate		313	1990
134-32-7	alpha-Naphthylamine	С	313	1990		6 Ethyl acetate	С		1991
135-20-6	Benzeneamine, N-hydroxy-N-		Χ	1990	142-28-	9 1,3-Dichloropropane	С		1991
	nitroso, ammonium salt				142-59-	6 Nabam		313	1995
135-20-6	Cupferron		313	1990	142-71-	2 Cupric acetate	С		1991
	Carbamodithioic acid, dibutyl,	С				7 Dipropylamine	С		1991
	sodium salt (Sodium				143-33-	9 Sodium cyanide (Na(CN))	С	*	
	dibutyldithiocarbamate)				143-50-	0 Kepone	С		
	Dipropyl isocinchomeronate		313	1995					

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ADD

CAS	NAME	\mathbf{C}	313	ADD	1100	CAS NAME	\mathbf{C}	313	4
144-34	-3 Carbamodithioic acid,	С	*	:		191-30-0 Dibenzo(a,I)pyrene		313*	
	dimethyl-, tetraanhydrosulfid					192-65-4 Dibenzo(a,e)pyrene		313*	
	with orthothioselenious					193-39-5 Indeno(1,2,3-cd)pyrene	С	313*	
	acid(selenium,					194-59-2 7H-Dibenzo(c,g)carbazole		313*	
	tetrakis(dimethyldithiocarbama					196-86-9 6-Methyl-1,3-dithiolo[4,5-		X	
	te))					b]quinoxalin-2-one			
	-3 Endothall	С				196-86-9 Chinomethionat		313	
148-18	-5 Carbamodithioic acid, diethyl-	С				197-14-3 Dodecylguanidine		X	
	,sodium salt (sodium					monoacetate			
<u> </u>	diethyldithiocarbamate)					197-14-3 Dodine		313	
148-79	-8 2-(4-Thiazolyl)-1H-		X	1995		205-82-3 Benzo(j)fluoranthene		313*	
	benzimidazole					205-99-2 Benzo[b]fluoranthene	С	313*	
	-8 Thiabendazole		313			206-44-0 Fluoranthene	С	*	
	-3 Melphalan	С		1991		207-08-9 Benzo(k)fluoranthene	С	313*	
	-4 2-Mercaptobenzothiazole		313			208-96-8 Acenaphthylene	С		
149-30			X	1995		218-01-9 Benzo(a)phenanthrene	С	313*	
	-5 Merphos		313			218-01-9 Chrysene	С	X*	
	-5 Monuron			313		224-42-0 Dibenz(a,j)acridine		313*	
	-8 Potassium cyanide	С	*	1991		225-51-4 Benz[c]acridine	С		
	-4 Aziridine	С	X	1990		226-36-8 Dibenz(a,h)acridine		313*	
	-4 Ethyleneimine	С	313			297-97-2 O,O-Diethyl O-pyrazinyl	С		
	-9 Diphosphoramide, octamethyl-	С		1991		phosphorothioate			
	-5 p-Nitrosodiphenylamine		313	1990		297-97-2 Thionazin	С		
156-60	-5 1,2-Dichloroethylene	С		1991		298-00-0 Methyl parathion	С	313	
	-7 Calcium cyanamide	С	313	}		298-00-0 Parathion-methyl	С	Χ	
	-9 Benzo(rst)pentaphene	С	313*			298-02-2 Phorate	С		
189-55	-9 Dibenz[a,i]pyrene	С	X*	1991	ļ	298-04-4 Disulfoton	С		
189-64	-0 Dibenzo(a,h)pyrene		313*	1995	ļ	300-76-5 Naled	С	313	
191-24	-2 Benzo[ghi]perylene	С			L		1		<u> </u>

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CAS	NAME	C	313	ADD	 CAS	NAME C	31	3	ADD
301-04-2	Lead acetate	C	*	1992	330-54-1	Diuron C			313
301-12-2	Oxydemeton methyl		313	1995	330-55-2	Linuron			313
301-12-2	S-(2-(Ethylsulfinyl)ethyl) O,O-		X	1995	333-41-5	Diazinon C			313
	dimethyl ester phosphorothioic				334-88-3	Diazomethane C			313
	acid				353-50-4	Carbonic difluoride C			
302-01-2	Hydrazine	С	313	1990	353-59-3	Bromochlorodifluoromethane		313	1992
303-34-4	Lasiocarpine	С		1992	353-59-3	Halon 1211	Х		1992
	Chlorambucil	С		1992	354-11-0	1,1,1,2-Tetrachloro-2-fluoroethane		313	1995
306-83-2	2,2-Dichloro-1,1,1-trifluoroetha	ne	313		354-11-0	HCFC-121a	X		1995
306-83-2	HCFC-123		X		354-14-3	1,1,2,2-Tetrachloro-1-fluoroethane		313	1995
309-00-2	1,4:5,8-	С	X	1990	354-14-3	HCFC-121	X		1995
	Dimethanonaphthalene,				354-23-4	1,2-Dichloro-1,1,2-trifluoroethane		313	
	1,2,3,4,10,10-hexachloro-				354-23-4	HCFC-123a	Х		
	1,4,4a,5,8,8a-hexahydro-				354-25-6	1-Chloro-1,1,2,2-tetrafluoroethane		313	
	(1.alpha.,4.alpha.,4a.beta.,5.al				354-25-6	HCFC-124a	Х		
	pha.,8.alpha.,8a.beta.)-				357-57-3	Brucine	С		313
309-00-2		С	313	1990	422-44-6	1,2-Dichloro-1,1,2,3,3-		313	1995
	Diethyl-p-nitrophenyl	C		1992		pentafluoropropane			
	phosphate				422-44-6	HCFC-225bb	Х		1995
	5-Bromo-6-methyl-3-(1-		X	1995	422-48-0	2,3-Dichloro-1,1,1,2,3-		313	1995
	methylpropyl)-2,4-(1H,3H)-					pentafluoropropane			
	pyrimidinedione				422-48-0	HCFC-225ba	X		1995
314-40-9		_	313	1995	422-56-0	3,3-Dichloro-1,1,1,2,2-		313	1995
	Mexacarbate	С		1992		pentafluoropropane			
	alpha-BHC	С	X	1992	422-56-0	HCFC-225ca	X		1995
	alpha-Hexachlorocyclohexane	C	313	1992	431-86-7	1,2-Dichloro-1,1,3,3,3-		313	1995
	beta-BHC	С		1992		pentafluoropropane			
	delta-BHC	С		1992	431-86-7	HCFC-225da	Х		1995
329-71-5	2,5-Dinitrophenol	С		1992	460-19-5	Cyanogen C		*	1992

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O A O	N/ 3 (F)	~			rica	ally by CAS	NI	~	212	4 DD
CAS	NAME	C	313	ADD	Г	CAS	NAME	<u>C</u>	313	ADD
	Ethanedinitrile	С		1992		510-15-6	Benzeneacetic acid, 4-chloro-	C	X	
	3-Chloro-1,1,1-		313	1995			.alpha(4-chlorophenyl)-			
	trifluoropropane						.alphahydroxy-, ethyl ester			
	HCFC-253fb		X	1995			Chlorobenzilate	С	313	
	Carbon oxide sulfide (COS)	С	X	1990			sec-Butylamine	С		1992
463-58-1	Carbonyl sulfide	С	313	1990		528-29-0	o-Dinitrobenzene	С	313	1990
465-73-6	Isodrin	С	313	1992		532-27-4	2-Chloroacetophenone	С	313	1990
492-80-8	Auramine	С	Χ	1990		533-74-4	Dazomet		313	
492-80-8	C.I. Solvent Yellow 34	С	313	1990		533-74-4	Tetrahydro-3,5-dimethyl-2H-		X	1995
494-03-1	Chlornaphazine	С					1,3,5-thiadiazine-2-thione			
	Diaminotoluene	С				534-52-1	4,6-Dinitro-o-cresol	С	313	1990
504-24-5	4-Aminopyridine	С		1992		534-52-1	4,6-Dinitro-o-cresol and salts	С		1992
504-24-5	Pyridine, 4-amino-	С		1992		534-52-1	Dinitrocresol	С	Χ	1992
	1,3-Pentadiene	С		1992		540-59-0	1,2-Dichloroethylene		313	1990
505-60-2	Ethane, 1,1'-thiobis[2-chloro-		Χ	1995		540-73-8	Hydrazine, 1,2-dimethyl-	С		
	Mustard gas		Χ	1995		540-84-1	2,2,4-Trimethylpentane	С		
506-61-6	Potassium silver cyanide	С	*	1992		540-84-1	2,2,4-Trimethylpentane	С		
	Silver cyanide	С	*	1992		540-88-5	tert-Butyl acetate	С		1992
506-68-3	Cyanogen bromide	С	*			541-09-3	Uranyl acetate	С		1992
	Cyanogen chloride	С	*			541-41-3	Ethyl chloroformate		313	1990
	Cyanogen chloride ((CN)Cl)	С	*	1992		541-53-7	2,4-Dithiobiuret	С	313	1992
	Ammonium carbonate	С		1992		541-53-7	Dithiobiuret	С	Х	1992
506-96-7	Acetyl bromide	С		1992		541-73-1	1,3-Dichlorobenzene	С	313	1990
507-55-1	1,3-Dichloro-1,1,2,2,3-		313	1995		542-62-1	Barium cyanide	С	*	1992
	pentafluoropropane					542-75-6	1,3-Dichloropropene	С	Х	1990
507-55-1	HCFC-225cb		Χ	1995		542-75-6	1,3-Dichloropropylene	С	313	1990
509-14-8	Methane, tetranitro-	С		1992		542-76-7	3-Chloropropionitrile	С	313	1992
	Tetranitromethane	С		1992		542-76-7	Propionitrile, 3-chloro-	С	X	1992

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CAS	NAME	C	31		ADD	icai	CAS	NAME	C	313
542-88	-1 Bis(chloromethyl) ether	С		313	1990		593-60-2 V	/inyl bromide	С	313
542-88	-1 Chloromethyl ether	С	Х		1990		594-42-3 N	Methanesulfenyl chloride,	С	
542-88	-1 Dichloromethyl ether	С	Х				tr	richloro-		
542-88	-1 Methane, oxybis[chloro-	С	Х		1990		594-42-3 F	Perchloromethyl mercaptan	С	313
543-90	-8 Cadmium acetate	С	*				594-42-3 T	richloromethanesulfenyl	С	X
544-18	-3 Cobaltous formate	С	*				С	chloride		
544-92	-3 Copper cyanide	С		*	1992		598-31-2 B	Bromoacetone	С	
	-2 Lithium carbonate			313	1995		601-64-9 D	DDE	С	
554-84	-7 m-Nitrophenol	С			1992		601-64-9 D	DDET	С	
556-61	-6 Isothiocyanatomethane		Χ		1995		606-20-2	2,6-Dinitrotoluene	С	313
556-61	-6 Methyl isothiocyanate			313	1995		608-73-1 H	lexachlorocyclohexane (all	С	
557-19	-7 Nickel cyanide	С	*					somers) CAS 608-73-1		
557-21	-1 Zinc cyanide	С		*	1992		608-93-5 P	Pentachlorobenzene	С	
	-6 Zinc acetate	С	*				609-19-8 3	3,4,5-Trichlorophenol	С	*
557-41	-5 Zinc formate	С		*	1992		610-39-9 3	3,4-Dinitrotoluene	С	
	-2 Ethion	С			1992		612-82-8 3	3,3'-Dimethylbenzidine		313
	-3 3-Chloro-2-methyl-1-propene			313	1995			lihydrochloride		
	-8 Thallium(I) acetate	С		*	1992		612-82-8 o	-Tolidine dihydrochloride		X
	-2 C.I. Basic Green 4			313	1990		612-83-9 3	3,3'-Dichlorobenzidine		313
573-56	-8 2,6-Dinitrophenol	С			1992		d	lihydrochloride		
	-9 Benzene, 2,4-diisocyanato-1-	С	Х		1990		615-05-4 2	2,4-Diaminoanisole		313
	methyl-						615-28-1 1	,2-Phenylenediamine		313
584-84	-9 Toluene-2,4-diisocyanate	С		313	1990			lihydrochloride		
	-2 1-Acetyl-2-thiourea	С			1992		615-53-2 N	N-Nitroso-N-methylurethane	С	
	-8 Calcium cyanide	С		*	1992		621-64-7 D	Di-n-propylnitrosamine	С	X
	-1 Mercuric cyanide	С		*	1992			N-Nitrosodi-n-propylamine	С	313
	-8 Mercuric thiocyanate	C		*	1992		624-18-0 1	,4-Phenylenediamine		313
	-0 Lead thiocyanate	C		*	1992			lihydrochloride		
	,	1		<u>I</u>			624-83-9 N	Methane, isocyanato-	С	Χ

CAS: Chemical Abstract Service Registry Number

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CAS	NAME	C	313	ADD	CAS		NAME	C	313	ADD
624-83-9	Methyl isocyanate	С	313	1990	76	64-41-0	2-Butene, 1,4-dichloro-	С	X	19
	tert-Amyl acetate	С		1992	76	65-34-4	Glycidylaldehyde	С		19
626-38-0	sec-Amyl acetate	С		1992	8′	12-04-4	1,1-Dichloro-1,2,2-trifluoroeth	ane	313	3
	Amyl acetate	С		1992	8′	12-04-4	HCFC-123b		X	
628-86-4	Mercury fulminate	С	*		8′	15-82-7	Cupric tartrate	С	*	
630-10-4	Selenourea	С	*	1992	82	22-06-0	Hexamethylene-1,6-	С	313*	19
630-20-6	1,1,1,2-Tetrachloroethane	С	313	1992			diisocyanate			
630-20-6	Ethane, 1,1,1,2-tetrachloro-	С	Х	1992	82	23-40-5	Diaminotoluene	С		
631-61-8	Ammonium acetate	С		1992	83	34-12-8	Ametryn		313	19
636-21-5	o-Toluidine hydrochloride	С	313	1990	83	34-12-8	N-Ethyl-N'-(1-methylethyl)-6-		X	19
639-58-7	Triphenyltin chloride		313	1995			(methylthio)-1,3,5,-triazine-2,4	1-		
640-19-7	Fluoroacetamide	С		1992			diamine			
644-64-4	Carbamic acid, dimethyl-,1-	С					C.I. Solvent Yellow 14		313	
	[(dimethylamino)carbonyl]-5-						N-Methyl-2-pyrrolidone		313	
	methyl-1H-pyrazol-3-y-l						N-Nitrosodi-n-butylamine	С	313	
	ester(Dimetilan)				92	24-42-5	N-Methylolacrylamide		313	19
680-31-9	Hexamethylphosphoramide	С	313	1990	93	30-55-2	N-Nitrosopyrrolidine	С		
684-93-5	N-Nitroso-N-methylurea	С	313	1990	93	33-75-5	2,3,6-Trichlorophenol	С	*	
692-42-2	Diethylarsine	С	*	1992	93	33-78-8	2,3,5-Trichlorophenol	С	*	19
696-28-6	Dichlorophenylarsine	С	*	1992	95	57-51-7	Diphenamid		313	3
696-28-6	Phenyl dichloroarsine	С			95	59-98-8	alpha - Endosulfan	С		19
709-98-8	N-(3,4-Dichlorophenyl)propana	mide	X	1995	96	61-11-5	Phosphoric acid, 2-chloro-1-(2	2,3,5-	X	19
709-98-8	Propanil		313	1995			trichlorophenyl) ethenyl dimet	hyl		
757-58-4	Hexaethyl tetraphosphate	С		1992			ester			
	N-Nitroso-N-ethylurea	С	313				Tetrachlorvinphos		313	
759-94-4	EPTC		Х				C.I. Basic Red 1		313	19
759-94-4	Ethyl dipropylthiocarbamate		313	1995			Heptachlor epoxide	С		
764-41-0	1,4-Dichloro-2-butene	С	313	1992	103	31-07-8	Endosulfan sulfate	С		19
					106	66-30-4	Chromic acetate	С	,	19

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NOTE: Some EPA Chemicals may have been delisted from the EPCRA 313 list, but the chemical MAY STILL be listed as a CERCLA chemical.

CAS	NAME	C	313	ADD	_	CAS	NAME	C	313	ADD
1066-33-7	Ammonium bicarbonate	С		1992	_		Zinc phosphide	С	*	1992
1072-35-1	Lead stearate	С		* 1992	4 1	1314-84-7	Zinc phosphide (conc. <=	С	,	1992
	Ammonium carbamate	C		1992			10%)			
1114-71-2	Butylethylcarbamothioic acid S	-	X	1995		1314-84-7	Zinc phosphide (conc. > 10%)	С		1992
	propyl ester						Lead sulfide	С	,	1992
1114-71-2	Pebulate		31	3			2,4,5-T amines	С		1992
1116-54-7	N-Nitrosodiethanolamine	С		1992		1319-77-3	Cresol (mixed isomers)	С	313	1990
1120-71-4	1,3-Propane sultone	С	Χ	1990		1320-18-9	2,4-D Esters	С	X	1992
1120-71-4	Propane sultone	C	31	3 1990		1320-18-9	2,4-D propylene glycol butyl	С	313	1992
1129-41-5	Carbamic acid, methyl- 3-	С					ether ester			
	methylphenyl ester					1321-12-6	Nitrotoluene	С		1992
	(metolcarb)					1327-52-2	Arsenic acid	С	,	1992
1134-23-2	Cycloate		31	3 1995		1327-53-3	Arsenic trioxide	С	,	1992
1163-19-5	Decabromodiphenyl oxide		31	3 1990		1327-53-3	Arsenous oxide	С	*	
1185-57-5	Ferric ammonium citrate	С		1992		1330-20-7	Xylene (mixed isomers)	С	313	1990
1194-65-6	Dichlobenil	С		1992		1332-07-6	Zinc borate	С	,	1992
1300-71-6	Xylenol	С		1992		1332-21-4	Asbestos (friable)	С	313	1990
1303-28-2	Arsenic pentoxide	С	*			1333-83-1	Sodium bifluoride	С		1992
1303-32-8	Arsenic disulfide	С	*			1335-32-6	Lead subacetate	С	,	1992
1303-33-9	Arsenic trisulfide	С		* 1992		1335-87-1	Hexachloronaphthalene		313	1990
1309-64-4	Antimony trioxide	С		* 1992		1336-21-6	Ammonium hydroxide	С		
1310-58-3	Potassium hydroxide	С		1992		1336-36-3		С	Χ	1990
1310-73-2	Sodium hydroxide	С		1992		1336-36-3	Polychlorinated biphenyls	С	313	1990
1313-27-5	Molybdenum trioxide		31	3 1990		1338-23-4	Methyl ethyl ketone peroxide	С		1992
1314-20-1	Thorium dioxide		31	3 1990			Naphthenic acid	С		1992
1314-32-5	Thallic oxide	С		* 1992			Ammonium bifluoride	С		1992
1314-62-1	Vanadium pentoxide	С		1992		1344-28-1	Aluminum oxide (fibrous forms)	313	1990
1314-80-3	Sulfur phosphide	С		1992			2,2'-Bioxirane	C	X	1990

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CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
		С	313	1990		Benzene, 2,4-dichloro-1-(4-		X	
	7-Benzofuranol,2,3-dihydro-	C				nitrophenoxy)-			
	2,2-dimethyl-(carbofuran				1836-75-5				313
	phenol)					Benfluralin			313
		С	313	1992		N-Butyl-N-ethyl-2,6-dinitro-4-		X	1995
	Benezeneamine, 2,6-dinitro-	C	X			(trifluoromethyl) benzenamine			
	N,N-dipropyl-4-						С		1992
	(trifluoromethyl)-					Hexachloropropene	С		1992
1582-09-8		С	313			1,3-Benzenedicarbonitrile, 2,4,5	5,6-	X	1990
	Hydrazine, 1,2-diethyl-	С				tetrachloro-			
	, , ,	С				Chlorothalonil		313	
	tetrabutyl (tetrabutylthiuram					Paraquat dichloride		313	1995
	disulfide)					6-Chloro-N-ethyl-N'-(1-methylet	thyl)-	X	1995
	, ,	С	313			1,3,5-triazine-2,4-diamine			
1646-88-4	Propanal, 2-methyl-2-	C			1912-24-9			313	
	(methylsulfonyl)-					'	С	X	1992
	,[(methylamino)carbonyl]					methoxybenzoic acid			
	oxime (Aldicarb sulfone)				1918-00-9		С	313	1992
	1,2-Dichloro-1,1-difluoroethane		313	1995	1918-16-7	2-Chloro-N-(1-methylethyl)-N-		X	1995
	HCFC-132b		X			phenylacetamide			
	3,5-Dibromo-4-hydroxybenzonit	trile	X	1995		Propachlor		313	1995
	Bromoxynil		313	1995	1928-38-7	2,4-D Esters	С		1992
	Bromoxynil octanoate		313	1995	1928-43-4	2,4-D 2-ethylhexyl ester		313	1995
	Octanoic acid, 2,6-dibromo-4-		X	1995	1928-47-8		С		1992
	cyanophenyl ester				1928-61-6		С		
	1,1-Dichloro-1-fluoroethane		313		1929-73-3		С	313	
	2,3,7,8-Tetrachlorodibenzo-p-	C		1992	1929-73-3	2,4-D Esters	С	Χ	
	dioxin (TCDD)				1929-77-7	Carbamothioic acid, dipropyl-,	С		
1762-95-4	Ammonium thiocyanate	С	*	1992		S-propyl ester (vemolate)			

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CAS	NAME	C	313	ADD	•	AS	NAME	C	313	ADD
	2-Chloro-6-(trichloromethyl)pyri	idine	X	1995	2	2212-67-1	1H-Azepine-1 carbothioic acid,		X	1995
1929-82-4			313	1995			hexahydro-S-ethyl ester			
1937-37-7	C.I. Direct Black 38		313	1990	2	2212-67-1	Molinate		313	1995
1982-69-0	3,6-Dichloro-2-methoxybenzoic	;	X	1995	2	2234-13-1	Octachloronaphthalene		313	1990
	acid, sodium salt				2	2300-66-5	Dimethylamine dicamba		313	1995
	Sodium dicamba		313	1995	2	2303-16-4	Carbamothioic acid, bis(1-	С	X	
2008-41-5	Carbamothioic acid, bis(2-	С					methylethyl)-S-(2,3-dichloro-2-			
	methylpropyl)-, S-ethyl ester						propenyl)ester			
	(butylate)				2	2303-16-4	Diallate	С	313	
2008-46-0	2,4,5-T amines	С		1992	2	2303-17-5	Triallate		313	
2025-85-2	Selenium dioxide	С		1992	2	2312-35-8	Propargite	С	313	1992
2032-65-7	Mercaptodimethur	С	X				Dimethyl chlorothiophosphate		313	1995
2032-65-7	Methiocarb	С	313	1992	2	2524-03-0	Dimethyl phosphorochloridothic	oate	X	1995
2095-58-1	Borane, trifluoro-		Χ	1995	2	2545-59-7	2,4,5-T esters	C		1992
2095-58-1	Boron trifluoride		313	1995	2	2556-36-7	1,4-Cyclohexane diisocyanate		313*	1995
2125-68-3	Phosphorous trichloride	С		1993	2	2602-46-2	C.I. Direct Blue 6		313	1990
2125-68-3	Phosphorus trichloride	С			2	2631-37-0	Phenol, 3-methyl-5-(1-	С		
2139-59-4	Potassium bromate		313	1995			methylethyl)-, methyl			
2146-10-8	Sodium chromate	С	*				carbamate (promecarb)			
2148-87-8	Hydrogen sulfide	С	313		2	2655-15-4	2,3,5-Trimethylphenyl		313	1995
2151-06-8	Strontium chromate	С	*				methylcarbamate			
2151-16-3	Ammonium bichromate	С	*				Sulfuryl fluoride		313	1995
2155-70-6	Tributyltin methacrylate		313	1995		2699-79-8			X	
2164-07-0	7-Oxabicyclo(2.2.1)heptane-2,3	3-	Χ	1995	2	2702-72-9	2,4-D sodium salt		313	1995
	dicarboxylic acid, dipotassium s				2	2763-96-4	5-(Aminomethyl)-3-isoxazolol	С		1992
	Dipotassium endothall		313	1995	2	2763-96-4	Muscimol	С		1992
	Fluometuron		313	1990		2764-72-9	Diquat	С		1992
2164-17-2	Urea, N,N-dimethyl-N'-[3-		Χ			2832-40-8	C.I. Disperse Yellow 3		313	1990
	(trifluoromethyl)phenyl]-				2	2837-89-0	2-Chloro-1,1,1,2-tetrafluoroetha	ane	313	

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CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
	0HCFC-124		X	ADD		4,4'-Diisocyanatodiphenyl ethe		313	1995
	2 Chlorpyrifos	С	, , , ,	1992	4170-30-3		C	X	1000
	4 Ferric ammonium oxalate	C		1992		Crotonaldehyde	C	313	
	2 2,4-D chlorocrotyl ester	C		313		N-Nitrosomethylvinylamine	C	313	
	2 2,4-D Esters	C	X	1992		C.I. Acid Green 3	10	313	1990
	5 Ammonium citrate, dibasic	C		1992		1,1'-Methylene bis(4-		313*	1995
	6 C.I. Solvent Orange 7	10	313	1990		isocyanatocyclohexane)			
	2 Ammonium tartrate	С		1992		5,6-Dihydro-2-methyl-N-pheny	/I-1.4-	X	1995
	3 4-Chloro-o-toluidine,	C				oxathiin-3-carboxamide	,		
	hydrochloride				5234-68-4	Carboxin		313	1995
3173-72-	6 1,5-Naphthalene diisocyanate	1	313*	1995	5344-82-1	Thiourea, (2-chlorophenyl)-	С	*	1992
	8 Cupric nitrate	С	*	1992		Dibenzo(a,e)fluoranthene	II	313*	1995
	2 O,O-Diethyl S-methyl	С		1992		1-Nitropyrene		313*	1995
	dithiophosphate					Chlorpyrifos methyl		313	1995
3383-96-	8 Temephos		313		5598-13-0	O,O-Dimethyl-O-(3,5,6-trichlor	o-2-	Х	1995
	9 Zinc carbonate		*			pyridyl)phosphorothioate			
3547-04-	4 DDE	С				Cupric oxalate	С	*	
3547-04-	4 DDET	С			5902-51-2	5-Chloro-3-(1,1-dimethylethyl)-	-6-	X	1995
3653-48-	3 (4-Chloro-2-methylphenoxy) ac	etate	X	1995		methyl-2,4(1H,3H)-pyrimidined	dione		
	sodium salt				5902-51-2	Terbacil		313	1995
3653-48-	Methoxone sodium salt		313	1995	5952-26-1	Ethanol,2,2-	С		
3689-24-	5 Sulfotep	С		1992		oxybis,dicarbamate			
3689-24-	5 Tetraethyldithiopyrophosphate	С		1992		(diethylene			
3697-24-	3 5-Methylchrysene		313*	1995		glycol,dicarbamate)			
3761-53-	3 C.I. Food Red 5		313	1990		Ammonium oxalate	С		
3813-14-	7 2,4,5-T amines	С				Ammonium oxalate	С		1992
4080-31-	3 1-(3-Chloroallyl)-3,5,7-triaza-1-		313	1995		2,4,5-T amines	С		1992
	azoniaadamantane chloride					2,4,5-T amines	С		1992
4098-71-	9 Isophorone diisocyanate		313*	1995	6459-94-5	C.I. Acid Red 114		313	1995
CAC CI	ical Abatuart Campias Desistary Number								

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CAS	NAME	C	313	ADD	 CAS	NAME	C	313	ADD
6533-73-9	Thallium(I) carbonate	С	*	1992	7446-14-2	Lead sulfate	С	*	1992
6533-73-9	Thallous carbonate	С	*			Thallium(I) sulfate	С	*	1992
7005-72-3	4-Chlorophenyl phenyl ether	С	*	1992	7446-18-6	Thallous sulfate	С	*	1992
7287-19-6	N,N'-Bis(1-methylethyl)-6-		X	1995	7446-27-7	Lead phosphate	С	*	1992
	methylthio-1,3,5-triazine-2,4-				7447-39-4	Cupric chloride	С	*	1992
	diamine				7488-56-4	Selenium sulfide	С	*	1992
	Prometryn		313		7550-45-0	Titanium chloride (TiCl4) (T-	С	Χ	1990
	Endrin aldehyde	С		1992		4)-			
7428-48-0	Lead stearate	С	*	1992	7550-45-0	Titanium tetrachloride	С	313	1990
7429-90-5	Aluminum (fume or dust)		313	1990	7558-79-4	Sodium phosphate, dibasic	С		1992
7439-92-1	Lead	С	313	1990	7601-54-9	Sodium phosphate, tribasic	С		1993
7439-96-5	Manganese		313	1990	7631-89-2	Sodium arsenate	С	*	1993
7439-97-6	Mercury	С	313	1990	7631-90-5	Sodium bisulfite	С		1993
7440-02-0	Nickel	С	313	1990	7632-00-0	Sodium nitrite	С	313	1993
7440-22-4	Silver – file to EPA ONLY		313	1990	7645-25-2	Lead arsenate	С	*	1993
7440-23-5	Sodium	С		1992	7646-85-7	Zinc chloride	С	*	1993
7440-28-0	Thallium	С	313		7647-01-0	Hydrochloric acid	С		1990
7440-36-0	Antimony	С	313		7647-01-0	Hydrogen chloride	С	Χ	1990
7440-38-2	Arsenic	С	313	1990		(anhydrous)			
7440-39-3	Barium		313	1990	7647-01-0	Hydrogen chloride (gas only)	С	Χ	1990
7440-41-7	Beryllium	С	313	1990	7647-18-9	Antimony pentachloride	С	*	1993
7440-43-9	Cadmium	С	313	1990	7664-38-2	Phosphoric acid	С		1990
7440-47-3	Chromium	С	313	1990	7664-39-3	Hydrofluoric acid	С	Χ	
7440-48-4	Cobalt		313	1990	7664-39-3	Hydrofluoric acid (conc. 50%	С	Х	
7440-50-8	Copper – reportable to EPA Of	NLY	313	1990		or greater)			
7440-62-2	Vanadium (except when in allo	y)	313	1990		Hydrogen fluoride	С	313	1990
7440-66-6	Zinc (fume or dust)	С	313	1990	7664-39-3	Hydrogen fluoride (anhydrous)	С	Χ	1990
7446-08-4	Selenium dioxide	С	*		7664-41-7	Ammonia	С	313	1990

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					ically by CAS				
CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
	Sulfuric acid	С		1995		Arsenic acid	С	*	1993
	Sodium fluoride	С		1993		Calcium arsenate	С	*	1993
	Sodium hypochlorite	С		1993		Potassium bichromate	С	*	1993
7696-12-0	2,2-Dimethyl-3-(2-methyl-1-		X	1995		Calcium hypochlorite	С		1993
	propenyl)cyclopropanecarboxy					Zinc hydrosulfite	С	*	1993
	acid (1,3,4,5,6,7-hexahydro-1,3				7779-88-6	Zinc nitrate	С	*	1993
	dioxo-2H-isoindol-2-yl)methyl e	ester			7782-41-4		С	313	1993
	Tetramethrin	1	313	1995		Selenium	С	313	1990
7697-37-2		С	313	1990	7782-50-5	Chlorine	С	313	1990
7697-37-2	Nitric acid (conc 80% or	С	X	1990	7782-63-0	Ferrous sulfate	С		1993
	greater)				7782-82-3	Sodium selenite	С	*	1993
	Zinc bromide	С	*	1993	7782-86-7	Mercurous nitrate	С	*	1993
	Ferric chloride	С		1993	7783-00-8	Selenious acid	С	*	1993
	Nickel chloride	С	*	1993	7783-35-9	Mercuric sulfate	С	*	1993
	Phosphorous trichloride	С		1993	7783-46-2	Lead fluoride	С	*	1993
	Ferrous sulfate	С	*	1993	7783-49-5	Zinc fluoride	С	*	1993
	Potassium permanganate	С	*	1993	7783-50-8	Ferric fluoride	С		1993
	Phosphorus	С		1993	7783-56-4	Antimony trifluoride	С	*	1993
	Phosphorus (yellow or white)	С	313	1990	7784-34-1	Arsenous trichloride	С	*	1993
7726-95-6			313	1995	7784-40-9	Lead arsenate	С	*	1993
	Zinc sulfate	С		1993	7784-41-0	Potassium arsenate	С	*	1993
	Chromic acid	С	*	1993	7784-46-5	Sodium arsenite	С	*	1993
	Potassium bromate		313	1995	7785-84-4	Sodium phosphate, tribasic	С		1993
	Sodium phosphate, tribasic	С		1993	7786-34-7	Mevinphos	С	313	1993
7758-94-3	Ferrous chloride	С		1993	7786-81-4	Nickel sulfate	С	*	1993
	Lead chloride	С	*	1993	7787-47-5	Beryllium chloride	С	*	1993
	Cupric sulfate	С	*	1993		Beryllium fluoride	С	*	1993
7761-88-8	Silver nitrate	С	*	1993		Beryllium nitrate	С	*	1993
7773-06-0	Ammonium sulfamate	С		1993		•	•		

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CAS NAME	C	313	ADD	CAS NAME C	313	ADD
7788-98-9 Ammonium chromate	С	*	1993	10026-11-6 Zirconium tetrachloride C		1993
7789-00-6 Potassium chromate	С	*	1993	10028-15-6 Ozone	313	1995
7789-42-6 Cadmium bromide	С	*	1993	10028-22-5 Ferric sulfate C		
7789-43-7 Cobaltous bromide	С	*	1993	10031-59-1 Thallium sulfate C	*	
7789-61-9 Antimony tribromide	С	*	1993	10034-93-2 Hydrazine sulfate	313	1990
7790-94-5 Chlorosulfonic acid	С		1993	10039-32-4 Sodium phosphate, dibasic C		
7791-12-0 Thallium chloride TICI	С	*	1993	10043-01-3 Aluminum sulfate C		1993
7791-12-0 Thallous chloride	С	*	1993	10045-89-3 Ferrous ammonium sulfate C		1993
7803-51-2 Phosphine	С	313	1993	10045-94-0 Mercuric nitrate C	*	1993
7803-55-6 Ammonium vanadate	С		1993	10049-04-4 Chlorine dioxide	313	1990
8001-35-2 Camphechlor	С	X		10049-04-4 Chlorine oxide (CIO2)	X	1990
8001-35-2 Camphene, octachloro-	С	X	1990	10049-05-5 Chromous chloride C	*	
8001-35-2 Toxaphene	С	313	1990	10061-02-6 trans-1,3-Dichloropropene	313	1995
8001-58-9 Creosote	С	313	1990	10099-74-8 Lead nitrate C	*	1993
8003-19-8 Dichloropropane -	С		1993	10101-53-8 Chromic sulfate C	*	1993
Dichloropropene (mixture)				10101-63-0 Lead iodide C	*	1993
8003-34-7 Pyrethrins	С		1993	10101-89-0 Sodium phosphate, tribasic C		1993
8014-95-7 Oleum (fuming sulfuric acid)	С		1993	10102-06-4 Uranyl nitrate C	*	1993
8014-95-7 Sulfuric acid (fuming)	С		1993	10102-18-8 Sodium selenite C	*	1993
8014-95-7 Sulfuric acid, mixture with	С		1993	10102-43-9 Nitric oxide C		1993
sulfur trioxide				10102-43-9 Nitrogen oxide (NO)		1993
9006-42-2 Metiram		313	1995	10102-44-0 Nitrogen dioxide C		1993
9016-87-9 Polymeric diphenylmethane		313*	1995	10102-45-1 Thallium(I) nitrate C	*	1993
diisocyanate	_			10102-48-4 Lead arsenate C	*	1993
10022-70-5 Sodium hypochlorite	С		1993	10108-64-2 Cadmium chloride C	*	
10025-87-3 Phosphorus oxychloride	С		1993	10124-50-2 Potassium arsenite C	*	1993
10025-87-3 Phosphoryl chloride	С		1993	10124-56-8 Sodium phosphate, tribasic C		1993
10025-91-9 Antimony trichloride	С	*	1993	10140-65-5 Sodium phosphate, dibasic C		1993

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CAS	NAME	C	313	ADD	CAS CAS	NAME	C	313	ADD
10192-30-0 A	Ammonium bisulfite	С		1993	12054-48-7	Nickel hydroxide	С	*	1993
10196-04-0 A	Ammonium sulfite	С			12122-67-7	Carbamodithioic acid, 1,2-		X	1990
10222-01-2	2,2-Dibromo-3-nitrilopropionam	ide	313	1995		ethanediylbis-, zinc complex			
10294-34-5 E	Borane, trichloro-		X	1995	12122-67-7	Zineb		313	1990
10294-34-5 E	Boron trichloride		313	1995	12125-01-8	Ammonium fluoride	С		1993
10347-54-3 1	1,4-		313*	1995	12125-02-9	Ammonium chloride	С		1993
E	Bis(methylisocyanate)cyclohex	ane			12135-76-1	Ammonium sulfide	С		1993
10361-89-4	Sodium phosphate, tribasic	С		1993	12427-38-2	Carbamodithioic acid, 1,2-		X	
10380-29-7 C	Cupric sulfate, ammoniated	С	*			ethanediylbis-, manganese co	mplex		
10415-75-5 N	Mercurous nitrate	С	*		12427-38-2			313	1990
10421-48-4 F	erric nitrate	С	*		12672-29-6	Aroclor 1248	С		
10453-86-8 5	5-(Phenylmethyl)-3-furanyl)met	hyl	X	1995	12674-11-2	Aroclor 1016	С		1993
2	2,2-dimethyl-3-(2-methyl-1-				12771-08-3	Sulfur monochloride	С		1993
p	propenyl)cyclopropanecarboxyl	ate			13194-48-4	Ethoprop		313	1995
10453-86-8 F			313	1995	13194-48-4	Ethoprophos		X	1995
	Nitrogen dioxide	С			13194-48-4	Phosphorodithioic acid O-ethy	I S,S-	X	1995
10588-01-9	Sodium bichromate	С	*			dipropyl ester			
10605-21-7 C	Carbamic acid, 1H-	С			13356-08-6	Fenbutatin oxide		313	1995
	penzimidazol-2-yl,methyl ester				13356-08-6	Hexakis(2-methyl-2-		X	1995
	carbendazim)					phenylpropyl)distannoxane			
11096-82-5 A		С				Nickel carbonyl	С	*	1993
11097-69-1 A		С		1993		Iron carbonyl (Fe(CO)5), (TB-	5-11)-	X	
11104-28-2 A		С		1993	13463-40-6	Iron, pentacarbonyl-		313	1995
11115-74-5 C	Chromic acid	С	*		13474-88-9	1,1-Dichloro-1,2,2,3,3-		313	1995
11141-16-5 A	Aroclor 1232	С		1993		pentafluoropropane			
	Cupric acetoarsenite	С		1993	13474-88-9	HCFC-225cc		X	
12002-03-8 F	Paris green	С		1993	13560-99-1	2,4,5-T salts	С		1993
12039-52-0 S	Selenious acid, dithallium(1+)	C	*	1993	13597-99-4	Beryllium nitrate	С	*	1993
S	salt				13684-56-5	Desmedipham		313	1995

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CAS	NAME	C	313	ADD	CAS	NAME	\mathbf{C}	313	ADD
13746-89-9	Zirconium nitrate	С	*	1993	15972-60-8	Alachlor		313	
13765-19-0	Calcium chromate	С	*	1993	16071-86-6	C.I. Direct Brown 95		313	1990
13814-96-5	Lead fluoborate	С	*		16543-55-8	N-Nitrosonornicotine		313	1990
13826-83-0	Ammonium fluoborate	С		1993	16721-80-5	Sodium hydrosulfide	С		1993
13952-84-6	sec-Butylamine	С		1993	16752-77-5	Ethanimidothioic acid, N-	С		
14017-41-5	Cobaltous sulfamate	С	*	1993		[[methylamino)carbonyl]			
14216-75-2	Nickel nitrate	С	*		16752-77-5	Methomyl	С		
14258-49-2	Ammonium oxalate	С		1993	16871-71-9	Zinc silicofluoride	С	*	
14307-35-8	Lithium chromate	С	*		16919-19-0	Ammonium silicofluoride	С		1993
14307-43-8	Ammonium tartrate	С		1993	16923-95-8	Zirconium potassium fluoride	С		1993
14324-55-1	Zinc,	С	*		16938-22-0	2,2,4-Trimethylhexamethylene		313*	1995
	bis(diethylcarbamodithioato-					diisocyanate			
	S,S)-(ethyl ziram)				17702-57-7	Methanimidamide, N,N-	С		
14484-64-1	Ferbam		313			dimethyl-N-[2-methyl-4-			
14484-64-1	Tris(dimethylcarbamodithioato-	-	X	1995		[[(methylaino)carbonyl]oxy]ph			
	S,S')iron					enol]-(Formparanate)			
14639-97-5	Zinc ammonium chloride	С	,	* 1993	17804-35-2			313	
14639-98-6	Zinc ammonium chloride	С	,	* 1993		D-Glucose, 2-deoxy-2-	С		1993
14644-61-2	Zirconium sulfate	С		1993		[[(methylnitrosoamino)-carbo			
15339-36-3	Manganese,	С		*	19044-88-3	4-(Dipropylamino)-3,5-		X	1995
	bis(dimethylcarbamodithioato-					dinitrobenzenesulfonamide			
	S,S)-				19044-88-3			313	1995
	(manganesedimethyldithiocar				19666-30-9	3-(2,4-Dichloro-5-(1-		X	1995
	bamate)					methylethoxy)phenyl)-5-(1,1-			
15646-96-5	2,4,4-Trimethylhexamethylene		313*	1995		dimethylethyl)-1,3,4-oxadiazol-	2(3H)-		
	diisocyanate					one			
15699-18-0	Nickel ammonium sulfate	С		* 1993	19666-30-9	•		313	1995
	Lead sulfate	С	,	* 1993		3,3'-Dimethoxybenzidine		313	1995
15950-66-0	2,3,4-Trichlorophenol	С	*			dihydrochloride			

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CAS	NAME	C 313		DD	CAS	NAME	\mathbf{C}	313	ADD
20325-40-0	o-Dianisidine dihydrochloride	Х		1995	23950-58-5	Benzamide, 3,5-dichloro-N-	С	Χ	199
20354-26-1	2-(3,4-Dichlorophenyl)-4-methyl-	Х		1995		(1,1-dimethyl-2-propynyl			
	1,2,4-oxadiazolidine-3,5-dione				23950-58-5	Pronamide	С	313	
20354-26-1	Methazole	3	313	1995	25154-54-5	Dinitrobenzene (mixed	С		
20816-12-0	Osmium oxide OsO4 (T-4)- C	Х		1990		isomers)			
20816-12-0	Osmium tetroxide C	3	313	1990	25154-55-6	Nitrophenol (mixed isomers)	С		199
20830-81-3	Daunomycin C				25155-30-0	Sodium	С		199
20859-73-8	Aluminum phosphide C	3	313	1993		dodecylbenzenesulfonate			
21087-64-9	Metribuzin	3	313	1995	25167-82-2	Trichlorophenol	С	*	
21725-46-2	Cyanazine	3	313	1995	25168-15-4	2,4,5-T esters	С		
22781-23-3	2,2-Dimethyl-1,3-benzodioxol-4-ol	X		1995	25168-26-7	2,4-D Esters	С		
	methylcarbamate				25311-71-1	2-((Ethoxyl((1-		Χ	199
22781-23-3	Bendiocarb	3	313	1995		methylethyl)amino]phosphinot	hioyl]o		
22961-82-6	1,3-Benzodioxol-4-ol,2,2- C					xy) benzoic acid 1-methylethyl	ester		<u> </u>
	dimethyl-,(bendiocarbphenol)					Isofenphos		313	199
23135-22-0	Ethanimidothoic acid, 2- C					Dinitrotoluene (mixed isomers) C	313	
	(dimethylamino)-N-					Dichlorobenzene	С	X	
	[[(methylamino)carbonyl]oxy]-				25321-22-6	Dichlorobenzene (mixed	С	313	
	2-oxo-, methyl ester (oxamyl)					isomers)			<u> </u>
23422-53-9	Methanimidamide, N,N- C				25376-45-8	Diaminotoluene (mixed	С	313	199
	dimethyl-N-[3-					isomers)			
	[[(methylamino)carbonyl]oxylp					Toluenediamine	С	X	199
	henyl]-,monohydrochioride					Dinitrophenol	С		199
	(formetanate hydrochloride)				26002-80-2	2,2-Dimethyl-3-(2-methyl-1-		X	199
	Thiophanate-methyl		313	1995		propenyl)cyclopropanecarboxy			
23564-06-9		X		1995		acid (3-phenoxyphenyl)methyl	ester		
	Phenylenebis(iminocarbonothioyl))				Phenothrin		313	
	biscarbamic acid diethyl ester				26264-06-2		С		
23564-06-9	Thiophanate ethyl	3	313	1995		dodecylbenzenesulfonate			

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				ortea Numeric					
CAS	NAME	C	313	ADD	CAS	NAME	C	313	ADD
26419-73-8	1,3-Dithiolane-2-	С				chlorobenzyl)			
	carboxaldehyde, 2,4-dimethyl-				28249-77-6	Thiobencarb		313	1995
	,O-				28300-74-5	Antimony potassium tartrate	С	*	1993
	[(methylamino)carbonyl]oxime				28407-37-6	C.I. Direct Blue 218		313	1995
	(tripate)				29082-74-4	Octachlorostyrene		313	
26471-62-5	Benzene, 1,3-	С	X	1990		O-(2-(Diethylamino)-6-methyl-	4-	Х	1995
	diisocyanatomethyl-					pyrimidinyl)-O,O-dimethyl			
26471-62-5	Toluene diisocyanate	С	X			phosphorothioate			
	(unspecified isomer)				29232-93-7	Pirimiphos methyl		313	1995
26471-62-5	Toluenediisocyanate (mixed	С	313			Paraformaldehyde	С		
	isomers)					,			
26628-22-8	Sodium azide (Na(N3))	С	313						
26638-19-7	Dichloropropane	С			30558-43-1	Ethanimidothioci acid, 2-	С		
26644-46-2	N,N'-(1,4-Piperazinediylbis(2,2	,2-	X	1995		(dimethylamino-n-hydroxy-2-			
	trichloroethylidene)) bisformam	nide				oxo-, methyl ester (A2213)			
26644-46-2	Triforine		313		30560-19-1			313	1995
26952-23-8	Dichloropropene	С			30560-19-1	Acetylphosphoramidothioic ac	id O,S-	. X	1995
27176-87-0	Dodecylbenzenesulfonic acid	С				dimethyl ester			
27314-13-2	4-Chloro-5-(methylamino)-2-[3-	-	X	1995	31218-83-4	3-		Χ	1995
	(trifluoromethyl)phenyl]-3(2H)-					((Ethylamino)methoxyphosphi	nothio	/	
	pyridazinone					l)oxy)-2-butenoic acid, 1-meth			
27314-13-2	Norflurazon		313	1995		ester			
27323-41-7	Triethanolamine	С		1993	31218-83-4	Propetamphos		313	1995
	dodecylbenzene sulfonate				32534-95-5	2,4,5-TP esters		С	
27774-13-6	Vanadyl sulfate	С		1993	33089-61-1				313
	d-trans-Allethrin		313	1995	33213-65-9	beta - Endosulfan		С	
28057-48-9	d-trans-Chrysanthemic acid of	d-	X	1995		N-(5-(1,1-Dimethylethyl)-1,3,4	-	X	1995
	allethrone					thiadiazol-2-yl)-N,N'-dimethylu			
28249-77-6	Carbamic acid, diethylthio-, S-((p-	X	1995		Tebuthiuron		313	1995
	· · · · · · · · · · · · · · · · · · ·		•		l	1		•	

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CAS	NAME C	313	ADD	CAS	NAME C	3	13	ADD
	Dichlorotrifluoroethane	313			3,3'-Dimethylbenzidine		313	
	Diflubenzuron	313			dihydrofluoride			
	O-Ethyl O-(4-	X	1995		o-Tolidine dihydrofluoride	>	Χ	1995
	(methylthio)phenyl)phosphorodithioid				Isopropanolamine C			1993
	acid S-propyl ester				dodecylbenzene sulfonate			
35400-43-2			313	42874-03-3	Oxyfluorfen		313	1995
	1-(2-(2,4-Dichlorophenyl)-2-(2-	Х	1995		1-(4-Chlorophenoxy)-3,3-dimethy	1-1-)	<	1995
	propenyloxy)ethyl)-1H-imidazole				(1H-1,2,4-triazol-1-yl)-2-butanone			
35554-44-0			313		Triadimefon		313	1995
35691-65-7	1-Bromo-1-(bromomethyl)-1,3-	313	3 1995	50471-44-8	3-(3,5-Dichlorophenyl)-5-ethenyl-	5- >	X	1995
	propanedicarbonitrile				methyl-2,4-oxazolidinedione			
36478-76-9	Uranyl nitrate C	*		50471-44-8	Vinclozolin		313	1995
37211-05-5	Nickel chloride C	,	* 1993	51026-28-9	Carbamodithioic acid, C	;		
38661-72-2	1,3-	313*	1995		hydroxymethyl)methyl-			
	Bis(methylisocyanate)cyclohexane				,monopotassium salt (potassium i	n-		
	Diethatyl ethyl	313	1995		hydroxymethyl-n-			
39156-41-7	2,4-Diaminoanisole sulfate	313	1990		methyldithiocarbamate)			
39196-18-4			1993	51235-04-2	Hexazinone		313	1995
39300-45-3	Dinocap	313	3	51338-27-3	2-(4-(2,4-	>	Χ	1995
39515-41-8	2,2,3,3-Tetramethylcyclopropane	Х	1995		Dichlorophenoxy)phenoxy)propar	noic		
	carboxylic acid cyano(3-				acid, methyl ester			
	phenoxyphenyl)methyl ester				Diclofop methyl		313	
39515-41-8	Fenpropathrin	313	1995	51630-58-1	4-Chloro-alpha-(1-	>	Χ	1995
40487-42-1	N-(1-Ethylpropyl)-3,4-dimethyl-2,6-	Χ	1995		methylethyl)benzeneacetic acid			
	dinitrobenzenamine				cyano(3-phenoxyphenyl)methyl e	ster		
40487-42-1	Pendimethalin	313	1995		Fenvalerate		313	1995
	O-(4-Bromo-2-chlorophenyl)-O-ethyl	- X	1995		Zinc ammonium chloride C			
	S-propylphosphorothioate				3-(2,2-Dichloroethenyl)-2,2-		×	1995
41198-08-7	Profenofos	313	1995		dimethylcyclopropane carboxylic			

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CAS NAME		313	ADD	CAS	NAME C	313	ADD
acid, (3-phenoxy-phenyl)methyl	ester				Ferric ammonium oxalate C		
52645-53-1 Permethrin			313	56189-09-4	Lead stearate C	*	
52652-59-2 Lead stearate	C	*		57213-69-1	Triclopyr triethylammonium salt	313	1995
52740-16-6 Calcium arsenite	С	*		59669-26-0	Thiodicarb	313	3
52888-80-9 Carbamothioic acid, dipropyl-,	C			60168-88-9	.alpha(2-Chlorophenyl)alpha4-	X	1995
S-(phenylmethyl) ester					chlorophenyl)-5-pyrimidinemethanol		
(prosulfocarb)				60168-88-9	Fenarimol	313	3
52888-80-9 Carbomothioic acid, dipropyl-,	С			60207-90-1	1-(2-(2,4-Dichlorophenyl)-4-propyl-	X	1995
S-(phenylmethyl) ester					1,3-dioxolan-2-yl)-methyl-1H-1,2,4,-		
(prosulfocarb)					triazole		
53404-19-6 2,4-(1H,3H)-Pyrimidinedione, 5-		X	1995	60207-90-1	Propiconazole	313	1995
bromo-6-methyl-3-(1-methylprop	oyl),			61792-07-2	2,4,5-T esters C		
lithium salt				62476-59-9	5-(2-Chloro-4-	X	1995
53404-19-6 Bromacil, lithium salt		313			(trifluoromethyl)phenoxy)-2-		
53404-37-8 2,4-D 2-ethyl-4-methylpentyl est	ter	313			nitrobenzoic acid, sodium salt		
53404-60-7 Dazomet, sodium salt		313			Acifluorfen, sodium salt	313	
53404-60-7 Tetrahydro-3,5-dimethyl-2H-1,3,	, -	X	1995	63938-10-3	Chlorotetrafluoroethane	313	
thiadiazine-2-thione, ion(1-), soc	dium			64902-72-3	2-Chloro-N-(((4-methoxy-6-methyl-	X	1995
53467-11-1 2,4-D Esters (C		1993		1,3,5-triazin-2-		
53469-21-9 Aroclor 1242 (C		1993		yl)amino]carbonyl)benzenesulfonami	i	
55285-14-8 Carbamic acid, (C				de		
[(dibutylamino)thio]methyl-					Chlorsulfuron	313	
,2,3-dihydro-2,2-dimethyl-7-				64969-34-2	3,3'-Dichlorobenzidine sulfate	313	1995
benzofuranyl				66441-23-4	2-(4-((6-Chloro-2-	X	1995
ester(carbosulfan)					benzoxazolylen)oxy)phenoxy)propar	1	
55290-64-7 2,3,-Dihydro-5,6-dimethyl-1,4-di	thiin	X	1995		oic acid, ethyl ester		
1,1,4,4-tetraoxide					Fenoxaprop ethyl	313	
55290-64-7 Dimethipin		313		67485-29-4	Hydramethylnon	313	1995
55406-53-6 3-lodo-2-propynyl butylcarbama	ite	313	1995				

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CAS	NAME C		ADD	CAS	NAME	C	313	ADD
67485-29-4	Tetrahydro-5,5-dimethyl-2(1H)-	Х	1995	72178-02	2-0 Fomesafen		313	1995
	pyrimidinone(3-(4-			72490-0	1-8 (2-(4-Phenoxy-phenoxy	,	X	1995
	(trifluoromethyl)phenyl)-1-(2-(4-				ethyl)carbamic acid eth	yl ester		
	(trifluoromethyl)phenyl)ethenyl)-2-				1-8 Fenoxycarb		313	
	propenylidene)hydrazone	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1005	74051-80	0-2 2-(1-(Ethoxyimino) buty	, ,	X	1995
	3-(2-Chloro-3,3,3-trifluoro-1-	X	1995		(ethylthio)propyl)-3-hyd	roxyl-2-		
	propenyl)-2,2-				cyclohexen-1-one			
	Dimethylcyclopropanecarboxylic acid	d			0-2 Sethoxydim		313	
	cyano(3-phenoxyphenyl) methyl			75790-84	4-0 4-Methyldiphenylmetha	ine-3,4-	313*	1995
00005.05.0	ester	0.4.0	1005		diisocyanate			
	Cyhalothrin	313	1995		7-3 2,4'-Diisocyanatodiphe	nyl sulfide	313*	1995
68359-37-5	3-(2,2-Dichloroethenyl)-2,2-	. X		76578-14	4-8 2-(4-((6-Chloro-2-		X	1995
	dimethylcyclopropanecarboxylic acid	d,			quinoxalinyl)oxy]pheno	xy) propanoic	;	
	cyano(4-fluoro-3-				acid ethyl ester			
	phenoxyphenyl)methyl ester	0.10			4-8 Quizalofop-ethyl		313	
68359-37-5	•	313		77501-63	3-4 5-(2-Chloro-4-		X	1995
	Fluvalinate	313			(trifluoromethyl)phenox			
69409-94-5	N-(2-Chloro-4-	X	1995		ethoxy-1-methyl-2-oxo	ethyl ester		
	(trifluoromethyl)phenyl)-DL-valine(+)				3-4 Lactofen		313	
	cyano(3-phenoxyphenyl)methyl este				4-3 Bifenthrin		313	1995
	2-(4-(5-(Trifluoromethyl)-2-	X	1995	88671-89	9-0 .alphaButylalpha(4	-	X	1995
	pyridinyl]oxy]-phenoxy)propanoic				chlorophenyl)-1H-1,2,4	-triazole-1-		
	acid, butyl ester				propanenitrile			
	Fluazifop butyl	313		88671-89	9-0 Myclobutanil		313	1995
71751-41-2		313		90454-18	8-5 Dichloro-1,1,2-trifluoroe	ethane	313	
	Avermectin B1	Х	1995	90982-32	2-4 Chlorimuron ethyl		313	1995
72178-02-0	5-(2-Chloro-4-	X	1995	90982-32	2-4 Ethyl-2-((((4-chloro-6-		Χ	1995
	(trifluoromethyl)phenoxy)-N-				methoxyprimidin-2-yl)-c	carbonyl)-		
	methylsulfonyl)-2-nitrobenzamide				amino]sulfonyl)benzoat	• '		

CAS: Chemical Abstract Service Registry Number

^{313:} EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,*: member of a chemical category – should not be reported as an individual chemical.

C: CERCLA Chemical – If a chemical is noted as ONLY a CERCLA chemical, then a STATE ONLY Form R as well as a Form S must be completed and submitted to DEP with your toxics use report.

CAS	NAME C	313	ADD
101200-48-0	2-(4-Methoxy-6-methyl-1,3,5-triazin-	Χ	1995
	2-yl)-		
	methylamino)carbonyl)amino)sulfonyl		
)-, methyl ester		
101200-48-0	Tribenuron methyl	313	1995
111512-56-2	1,1-Dichloro-1,2,3,3,3-	313	1995
	pentafluoropropane		
111512-56-2	HCFC-225eb	X	1995
111984-09-9	3,3'-Dimethoxybenzidine	313	1995
	hydrochloride		

	CAS	NAME	\mathbf{C}	313	ADD
	111984-09-9	o-Dianisidine hydrochloride		Χ	1995
	127564-92-5	Dichloropentafluoropropane		313	1995
	128903-21-9	HCFC-225aa		Χ	1995
	134190-37-7	Diethyldiisocyanatobenzene		313*	1995
ſ	136013-79-1	1,3-Dichloro-1,1,2,3,3-		313	1995
		pentafluoropropane			
ſ	136013-79-1	HCFC-225ea		Χ	1995

CAS: Chemical Abstract Service Registry Number

313: EPCRA 313 Reportable Chemical, X: EPCRA 313 Synonym,*: member of a chemical category – should not be reported as an individual chemical.

C: CERCLA Chemical – If a chemical is noted as ONLY a CERCLA chemical, then a STATE ONLY Form R as well as a Form S must be completed and submitted to DEP with your toxics use report.

Appendix C

RECALCULATING BRIS AND ERIS WHEN PRODUCTION UNITS OF UNITS OF PRODUCT HAVE BEEN REDEFINED

If you make a change in your unit of product or how you define your production units, you will need to revise your Byproduct Reduction Index (BRI) and your Emissions Reduction Index (ERI). The key question is: Did your facility implement any toxics use reduction (TUR) efforts between the base year and the year of the change? If not, you are not required to re-calculate the BRI and the ERI for previous years. You can assume that the amount of byproduct per unit of product for this year was the same as in the base year. Measure progress against that number from now on. (The same is true of the ERI.)

If your facility did implement TUR, you need to adjust your byproducts per unit of product and your emissions per unit of product numbers from the base year. If you have sufficient information to recalculate those numbers, you should do so. If you do not have sufficient information, you should use an estimate.

The following is one way to do this estimate. First, estimate what this year's byproduct from the production unit would have been if you had not implemented TUR. Then divide that number by this year's number of products. Do the same for emissions.

The result is a byproduct per unit of product amount (and an emissions per unit of product amount) that you can assume holds true for the base year. You should measure progress against that amount from now on. If you have any questions, contact MassDEP at 617-292-5711.

When you submit your toxics use report, you should note that you have recalculated you BRIs and ERIs in a cover letter or on the Form S. Keep the documentation of the change in your records.

Appendix D

GENERAL REPORTING ERRORS

1. The contents of a toxics use report submitted to MassDEP is not complete.

A complete toxics use report includes the following:

- ✓ Form S Cover Sheet
- ✓ Form R (or Form A, however Form As are not permitted for PBTs) for each chemical
- ✓ Form S for each chemical
- ✓ Fee worksheet
- ✓ TURA Billing Information Form

Incomplete TURA reporting may result in late fees, enforcement and fines.

Each facility must file one Form S cover sheet for the facility as a whole. For each chemical reported, a Form R and Form S must be completed. For ease of review, please place the Form R on top of the Form S for each chemical reported

COMMON REPORTING ERRORS

1. Total chemical use as reported in Sections 1 c, d, and e of the Form S is not equal to the sum of the amounts generated as byproduct (Section 1 f) and shipped in product (Section 1 g).

Section of the report that may need correcting: FORM S: Section 1: Facility-wide Use of Chemical

Generally, there is a materials balance between chemical inputs and outputs on a facility-wide basis:

manufactured + processed + otherwise used = byproduct + shipped in product

If this is not the case on all of your forms, you should have checked one of the explanations (i.e., chemical was recycled on-site) in Section 2 on the Form. Otherwise, your materials accounting for the chemical may need to be checked.

2. The Byproduct Reduction Index and/or the Emissions Reduction Index reported on the Form S is significantly less than 0 or greater than 100.

Sections of the report that may need correcting: FORM S: Section 4, item d. (Byproduct Reduction Index) and/or item e. (Emissions Reduction Index) (Please refer to page 24 and 25 of the reporting instructions.)

There may be an error in calculating either the BRI or the ERI if they are significantly less than 0 or greater than 100. A BRI and/or ERI significantly below 0 indicates either a large increase in byproduct generation and/or emissions, or that the calculation of the BRI and ERI is incorrect. In the latter case, you will need to check your BRI and ERI calculations (e.g., the unit of product and/or production unit may not be designated properly).

The BRI or ERI cannot be greater than 100, since this value represents the total elimination of the chemical. If your BRI and ERI is greater than 100, you will need to recheck your calculations for errors.

3. The Byproduct Reduction Index and the Emissions Reduction Index are not equal.

Sections of the report that may need correcting: FORM S: Section 4, item d. (Byproduct Reduction Index) and/or item e. (Emissions Reduction Index).

Your report may indicate that the BRI does not equal the ERI. These two numbers should be equal unless you are doing destructive treatment (see Section 7 of the Form R), on-site recycling, or waste was not shipped off-site. (Please refer to page 26 of the reporting instructions.)

4. The amount reported as byproduct on the Form S is *less than* the quantities reported in Section 8 (Source Reduction and Recycling Activities) of the Form R.

Sections of the report that may need correcting: FORM S: Section 1, item f: Facility-Wide byproduct generated and/or FORM R: Sections 5 and 6.

Byproduct will usually be equal to, or exceed, transfers and releases, since byproduct is the total quantity of waste that is generated during the production process calculated **before** it has been treated. The only time byproduct is less than transfers and releases is when some byproduct is reported as product on the Form S. (Please refer to pages 19-20 of the instructions.)

5. The amount reported as byproduct on the Form S is *greater than* the quantities reported in Section 8 (Source Reduction and Recycling Activities) of the Form R when there is no on-site energy recovery, recycling, or destructive treatment.

Sections of the report that may need correcting: FORM S: Sections 1 item f: Facility-Wide byproduct generated, Section 2: Optional Questions and/or FORM R: Section 7.

Byproduct is the total quantity of waste that is generated during the production process, calculated **before** it has been treated. If a treatment system destroys some or all of the byproducts, or some of the byproducts are recycled, the reported byproducts will be greater than releases and transfers off-site. If there is no destructive treatment (including energy recovery), on-site recycling, or byproduct reported as product, then

total byproduct on the Form S will be equal to Section 8 of the Form R. (Please refer to pages 19-20 of the instructions.)

6. The current reporting year (2005) is incorrectly entered as the base year.

Section of the report that may need correcting: Form S Section 4, item b. Base Year.

The reporting year of 2005 should only be entered as a base year if the production unit is NEW for 2005 or if you are a new filer for 2005.

Form S Cover Sheet -Common Reporting Error

1. The production unit has been renumbered.

Section of the report that needs to be corrected: FORM S Cover Sheet - Section 4, item a.

While you may add new production unit numbers or change the wording describing a production unit, production unit numbers, once assigned, must <u>not</u> be changed, since this directly affects your BRIs and ERIs. (Please refer to page 15 of the instructions).

Appendix E

QUESTIONS and ANSWERS

GENERAL REPORTING QUESTIONS

1. What happens if we reported last year but are exempt this year?

If your facility does not have to report this year but reported in a previous year, MassDEP recommends that you notify MassDEP in writing and explain why. This will help MassDEP distinguish facilities that are exempt from those that are out of compliance.

Note: The toxics use report cover sheet has an optional section that you may complete if your facility is newly exempt from reporting (see p. 12 of this guidance). You also may send a letter to MassDEP.

2. A company redefines a unit of product and/or a production unit. This results in the need to recalculate BRIs and ERIs, which in turn requires the recalculation of base year information. What should the company do if the data for the base year is insufficient or missing?

If the data for your current base year is either insufficient or missing, you may change your base year to be the earliest year in which you consider your data to be sufficient to provide a meaningful BRI and ERI. You would not be required to change intermediate years.

3. Should the plan update summary be submitted this year?

YES. Plan updates are due in even-numbered calendar years. Your plan update is due July 1, 2006.

4. How would I file a trade secret claim this year?

If you are making a trade secret claim in your 2005 reporting package, please call MassDEP's TURA Program at (617) 292-5711 to request the "Trade Secret Special Instructions". (See p. 11 of the reporting package.)

WASTE TREATMENT CHEMICALS

1. If I claim my whole facility as a production unit, can I include my waste treatment system as part of my production unit?

No. Waste treatment units are not considered manufacturing processes and therefore cannot be included in production units. Companies should track chemicals used in

waste treatment units separately from those used in production units. Companies can report chemical use associated with waste treatment operations in Section 3 of the Form S, Chemicals Used in Waste Treatment Units.

2. What if my waste treatment unit is "hard-piped" or "integral" to my production process, can I then consider it part of my production unit?

No. Waste treatment units are not considered production processes even if they are "integral" to the manufacturing process. Chemicals used in them are reported separately from production units.

3. If I previously reported my waste treatment unit as part of my production unit, what should I do to correct my reporting?

First, you should consider all waste streams previously treated by your waste treatment unit as byproducts from production units in your facility. These byproducts should be allocated back to the production unit where they were generated. Byproducts should then be included in the BRI calculation for the specific production unit in which they were generated.

Chemicals used to perform the waste treatment operations (for example, acids and bases used for pH adjustment) can be reported separately in Section 3 of the Form S. You should continue to use the same production unit and production unit number for the purposes of calculating your BRI. Amounts of byproduct previously not reported should be added to the amounts used to calculate the BRI and ERI for your base year. You would not be required to change intermediate years.

4. When I dump my spent acid process bath, I use it in my waste treatment, as is, without further treatment. Can I report this as byproduct as product?

No. Byproduct as product that is used on site must be used in a manufacturing process to be considered byproduct as product. Amounts of spent acid and base baths that are used to adjust pH in waste treatment operations can be used to reduce facility-wide use of the reportable chemicals. They are still considered byproducts when they leave the production unit.

TUR PLANNER CERTIFICATION

1. How do I receive an application for certification or recertification as a TUR Planner?

Please call 617-556-1011 for a "Planner Certification Package" or "Planner Recertification Package," depending upon your situation. You can also download the Package from MassDEP's web site at www.mass.gov/dep/bwp/dhm/tura/turapubs.htm.

2. Once I receive the TUR Planner application package, if I have questions concerning filling it out, can someone assist me?

Yes. Please call the MassDEP Planner Certification Program at 617-556-1011.

3. Can a planner receive credit for applicable courses taken outside the TURI and OTA curriculum?

Yes, as long as the courses fit the regulatory requirements found in the TUR Planner Guidance Document and in 310 CMR 50.58. Courses offered by either OTA or TURI are usually prior-approved by MassDEP for use by TUR Planners seeking recertification credit. However, Planners do not receive credit by simply attending the pre-approved course; they must apply to MassDEP to actually receive the credit via the "Pre-approval Credit Form" attached to all recertification applications or as part of their completed recertification application.

Any other organization wishing to offer a course(s) pre-approved for credit for TUR Planners for credit may contact the MassDEP Planner Program at 617-556-1011 for more information. MassDEP normally requests some tangible information (e.g., a syllabus, course description and length of time) prior to pre-approving a course for Planner credit. Once again, each Planner attending a pre-approved course and seminar must apply to MassDEP in order to receive the credit. Call the MassDEP Planner Certification Program at 617-556-1011 or download the list of approved courses from the MassDEP TURA web site.

4. How do I find out what courses TURI is offering or planning to offer which are suitable for credit toward recertification?

Information on courses offered by TURI is available on the TURI web site at www.turi.org.

5. Once I take a course certified by MassDEP for to TUR Planner credit, do I still need to apply to MassDEP for credit?

Yes. MassDEP may give a course instructor permission to state that his or her course has been approved by MassDEP for use by TUR Planners for recertification credit. However, in order to receive the credit you must apply to MassDEP. You may wait until you have all the required credits or you may use the "Pre-approval Credit Form" included in the application package to receive credit immediately.

6. Is there a rollover of recertification credits into the next 2-year period allowed for those TUR Planners who have accumulated more than the required credits in any given certification and recertification period?

Generally no, since allowing a rollover of extra credits into the next recertification period would defeat the basic purpose of recertification, which is to keep TUR Planners up-to-date on current TUR planning techniques. However, exceptions may be made in certain situations. For example, an exception could be made for obtaining extra credits by taking a relevant TUR course during the end of a TUR Planner's certification or recertification period. In this case, some of the surplus credits could possibly be used toward the next recertification period.

7. When are TUR Planner examinations held?

There are no set dates for TUR Planner examinations. MassDEP generally offers the examination once each year during late fall (usually in November), after TURI's planner course has been completed. All eligible TUR Planners are notified by mail. Everyone who has taken the TURI planner course since the last planner examination is notified by MassDEP of the upcoming examination. In addition, all examinees who have failed the examination in the past are notified by MassDEP. TURI also announces the pending examination in its planner classes.

8. Can I receive an application for certification or recertification as a TUR Planner via the World Wide Web?

TUR Planners may obtain MassDEP TURA Planner certification material by accessing the permit area of the TURA Web site at: http://www.mass.gov/dep/toxics/approvals/turforms.htm#cert.

9. Is there a professional organization for TUR Planners?

Yes. The Toxics Use Reduction Planning Association (TURPA) was formed in 1994. About three quarters of the members are from manufacturing facilities, some are consultants, and some belong to state agencies. For more information about TURPA, contact TURPA at 1-888-go-TURPA (1-888-468-8772) or visit their web siteat: http://www.turpa.org.

Appendix F

GUIDANCE DOCUMENT FOR TURA REPORTING AND PLANNING FOR CERTAIN METALS AND METAL ALLOYS

An alloy is a mixture of two or more metals or one or more metals and a nonmetal, as in carbon steel.

Effective <u>reporting year 1995</u>, the TURA Administrative Council delisted certain metals when present in a solid or molten alloy, but not including aerosols. The metals are:

Copper Nickel Chromium Cobalt Manganese

Effective <u>reporting year 1998</u>, the TURA Administrative Council delisted silver-copper mixture when present in an alloy form, but not including aerosols.

The established definition of an "alloy" requires that metals mixed with the primary metal must be intentionally added to improve its properties. A metallic substance that is pure or contains other metals as impurities is not considered an alloy. Consequently, copper and silver that is pure or that contains small amounts of impurities were not covered by the two Administrative Council delistings described above.

Effective reporting year 1999, however, the Administrative Council delisted pure (i.e., zero valance) copper and pure silver (including forms containing impurities), but not including aerosols.

The delistings for all the metals described above **DO NOT** extend to aerosols, dissolved metals, metal compounds, or metals that are not zero valence throughout the entire production process. Note that aerosols are metal particles that are less than 50 microns in diameter.

These metals have not been delisted from the EPCRA Toxics Release Inventory (TRI) List. Although delisting by the TURA Administrative Council means that no Form S need be submitted, the federal Form R is still required. The Form R submitted to MassDEP should be identified as "federal only."

Guidance

Questions have been raised regarding implementation of these delistings. This guidance has been produced to assist the regulated community in complying with TURA. If you have any remaining questions after reading this document, please contact MassDEP for compliance assistance or the Office of Technical Assistance for further information.

The delisted metals are copper, nickel, chromium, cobalt, manganese and silver. Some of the processes in which those metals might be used are described below with specific guidance.

- □ Etching processes When a metal is removed from metal stock through chemical processing, the resultant metal salt is reportable if it is produced in threshold quantities. (In this case, the metal salt is "coincidentally manufactured.") The 25,000-pound threshold would apply if the metal salt were the only reportable chemical; the threshold drops to 10,000 pounds if a facility is using other reportable chemicals. It should be noted that the entire weight of the metal salt is considered when determining whether a threshold has been met, and not just the amount of the metal in the salt. As for the stock itself, any delisted metals contained in it are not reportable.
- □ <u>Electropolishing operations</u> The metal salts in solution are reportable as "coincidentally manufactured" if they are produced in threshold quantities. Any delisted metals contained in the stock are not reportable.
- ☐ Grinding Operations The delisted metals are not exempt from reporting when contained in aerosols, i.e., particles less than 50 microns in diameter (in this case, the metal is reported as "processed"). These metals are reportable if they are present in threshold quantities. When determining whether the reporting threshold has been exceeded, only the weight of the listed metal in the aerosol is considered, and not the total weight of the aerosol. Any delisted metals contained in the stock are not reportable.
- <u>Multiple processes</u> In production units with multiple processes, certain individual processes may produce metal aerosols or metal salts in solution. Those aerosols and metal salts in solution would be reportable if produced in threshold quantities, as described above.
- Alloys in powdered form If a metal is used in the powdered form, the facility will need to perform a particle size analysis to determine the amount of material less than 50 microns in size. If threshold quantities are produced, the metals are reportable if they are present in particles less than 50 microns in size. When determining whether the reporting threshold has been exceeded, only the weight of the listed metal is considered, and not the total weight of particles.

Relationship Between the Metal Delistings and MassDEP's "Expanded Article" Exemption

In 1994, MassDEP adopted a policy that broadened the article exemption for state reporting purposes. Under the EPCRA article exemption, listed chemicals in an "article" are exempt if the item meets certain criteria, including the requirement that the article must retain its initial thickness or diameter. (See page 4 of this guidance for more information on the article exemption.)

MassDEP's "expanded article exemption" was designed primarily to provide some reporting relief for firms otherwise ineligible for the exemption because they changed the shape of the article. Firms that draw wire are one example.

MassDEP's expanded exemption applies to copper and its alloys, as well as steels including stainless steel. It excludes lead.

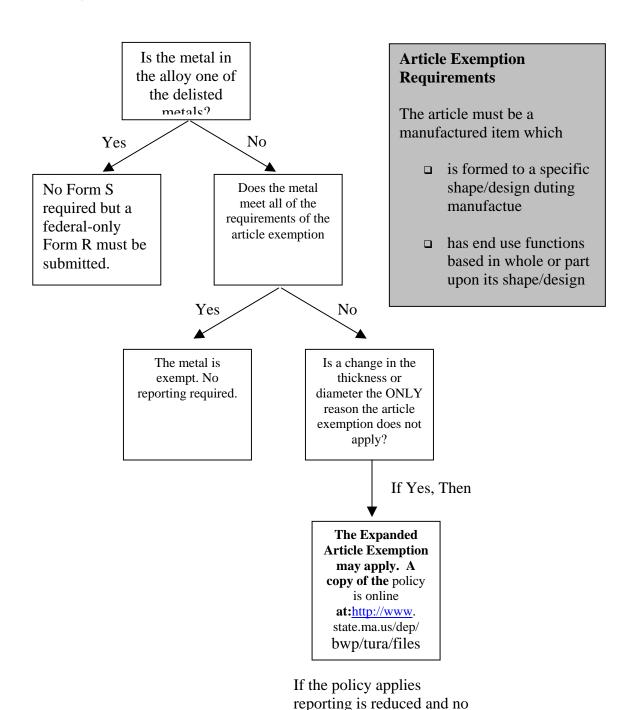
The policy is still in effect but the Administrative Council metal delistings apply to many of the metals which might be covered by the policy. Depending upon the circumstances, the expanded article exemption could be applicable where a metal fails to meet all the conditions of the delistings.

Example: The metal delisting applies to copper, nickel, chromium, cobalt, manganese and silver. Some stainless steels contain vanadium, which has not been delisted. A firm using such a steel with reportable quantities of vanadium may wish to consult **BWP-94-014 Policy for TURA Reporting and Planning for Certain Metalworking Operations**.

A copy of the policy and more information on the requirements may be obtained on the web at www.mass.gov/dep/bwp/dhm/tura/ or by calling 617-292-5711.

Reporting Guidance

Applying the standard article exemption with the "expanded Article exemption"



fees are required

Appendix G

INTEGRAL RECYCLING GUIDANCE -UNDER THE TOXICS USE REDUCTION ACT (M.G.L.C 211)

Introduction

The Toxics Use Reduction Act (TURA) identifies six (6) techniques which constitute toxics use reduction. The sixth technique is "recycling, reuse or extended use of toxics by using equipment or methods which become an integral part of the production unit of concern, including but not limited to filtration and other closed loop methods." TURA also states, in part, that "toxics use reduction shall not include... off-site or out-of-production unit waste recycling." This guidance provides detail on what types of activities are considered "integral recycling" under TURA.

This Appendix also provides general guidance on how each activity is regulated under MassDEP's hazardous waste regulations (310 CMR 30.000). The reader must refer to the specific hazardous waste regulations, separate from this TURA guidance, to assure operational compliance with hazardous waste requirements. Critical terms such as "integral," "production process," "closed loop," "totally enclosed," and others are used differently under different statutes. As such, people must be careful to consider differing requirements to avoid non-compliance problems. Companies should check the regulations themselves or contact MassDEP at 617-292-5711 for further compliance assistance, if needed.

Should this integral recycling guidance result in significant reductions in your 2005 facility-wide use or byproduct figures, please contact MassDEP at 617-292-5711. Such significant changes in reporting can skew TURA trend data analysis and your notification to MassDEP will allow us to adjust our figures to prevent over counting of actual reductions.

DEFINITION

Activities Considered "Integral Recycling" Under This Guidance

□ In order for an activity to qualify as "integral recycling" the material must be recycled or reused, not treated. From the TURA perspective, this is important because the statutory language refers to "recycling, reuse or extended use of toxics..." and also because the statutory definition of toxics use reduction specifically excludes anything that is, or that promotes "end-of-pipe treatment."

If the recycling equipment and piping are permanently connected to a single production unit, the operation is integral. Also, if the recycling equipment is connected via detachable* hoses to a single production unit, the operation is integral.

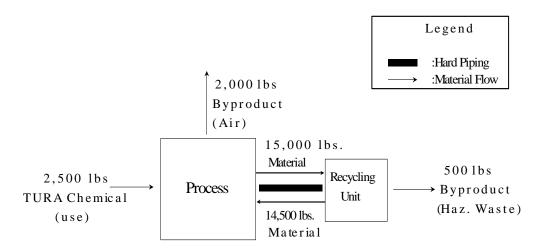
- □ Detachable*, portable recycling equipment, directly connected to the production unit while the recycling equipment is in operation, is considered integral. There must be a sealed connection while the unit is in operation.
- □ If a manufacturing process includes a directly connected holding tank as part of its production unit, and the recycling unit is directly connected to the tank, this qualifies as integral recycling under this policy.
- * Whenever detachable pipes are used in conjunction with a recycling unit, a written spill prevention plan must be prepared and kept on file to minimize worker exposure and to prevent spills and leaks when connecting, disconnecting, and operating the recycling unit. This spill prevention plan minimizes any increased risk of worker exposures that may arise from this expanded definition of integral recycling under TURA. TURA filers who do not wish to prepare and keep on file this spill contingency plan should consider the recycling unit (connected via detachable hoses) non-integral under TURA and report accordingly.

INTEGRAL RECYCLING EXAMPLES

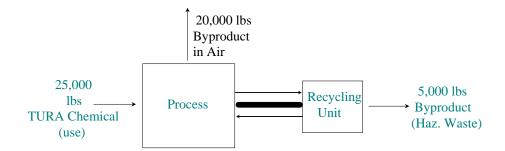
✓ Example: 1

A recycling unit which is hard-piped in the process qualifies as integral. The recycling unit is totally enclosed during operation. (Totally enclosed recycling units are units that have been designed, constructed, and operated to prevent spills, leaks or emissions of hazardous materials to the workplace and environment.)

A. This diagram illustrates the materials accounting and quantities generated each time the reportable chemical is an input to this process. (For this example, it occurs ten times each year.)



B. This diagram shows quantities reported annually for this chemical which are integrally recycled in this process.



Description of example process: As shown in diagram A, ten times a year 2,500 lbs of virgin chemical is fed into the process to supplement the 14,500 lbs of integrally recycled chemical which is reintroduced to the process on the same schedule. While parts are being processed using each of ten batches of chemical, 2,000 lbs of byproduct is released into the air. When each batch of chemical is spent, it is pumped through the integrally connected recycling unit which produces 500 lbs of byproduct as hazardous waste per batch. The quantities in diagram B show the yearly amounts of byproduct produced and material processed. Because the unit is integrally connected the chemical recycled is not reported as an input to the process, and spent chemical piped to the recycling unit is not considered byproduct. If any of the recycled solvent can not be used in the process, and is shipped

✓ Example: 1 Con't

off-site for reuse without any treatment or recovery, it would be considered byproduct as product and reported in Section 1 item g. of the Form S "Shipped in or as Product." (See section on Byproduct as Product, p.G-6.)

For this example of Integral Recycling, the Form S, Section 1 would be filled out as follows:

c. Manufactured: 0 d. Processed: 0

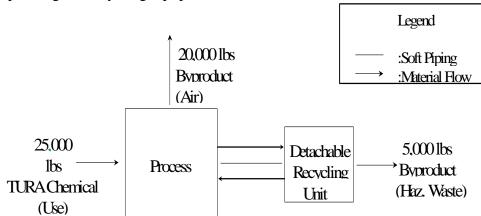
e. Otherwise Used: **25000** f. Generated as Byproduct: **25000**

g. Shipped in or as Product: 0*

^{*} If any integrally recycled material is shipped as product (byproduct as product), item g. would reflect that quantity.

✓ Example: 2

To qualify as integral recycling, the portable recycling unit must be connected while the recycling unit is in operation via detachable couplings that are appropriate for such use and perform similarly to hard piping. The recycling unit is totally enclosed during operation. A written spill prevention plan must be developed to minimize risk of worker exposure and to prevent spills or leaks when connecting and disconnecting or operating the recycling equipment.



Description of example process: The quantities in the diagram show the yearly amounts of byproduct produced and material processed. Because the unit is integrally connected, the recycled chemical is not reported as an input to the process, and spent chemical piped to the recycling unit is not considered byproduct. If any of the recycled solvent can not be used in the process, and is shipped off-site for reuse without any treatment or recovery, it would be considered byproduct as product and reported in section 1.2g of the Form S "Shipped in or as Product." (See section on Byproduct as Product, p.G-6.)

For this example of Integral Recycling, the Form S Section 1 would be filled out as follows:

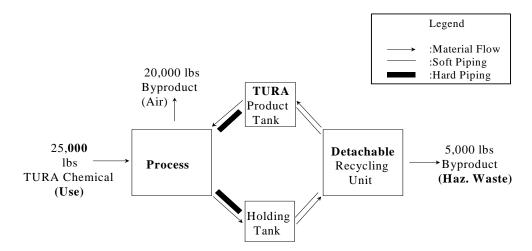
```
c. Manufactured: 0 d. Processed: 0 e. Otherwise Used: 25000 f. Generated as Byproduct: 25000 g. Shipped in or as Product: 0*
```

✓ Example: 3

A recycling process which utilizes a holding tank, piped to the process, to store spent chemicals which are then recycled via either a permanent or detachable recycling unit, qualifies as integral. The recycling unit must be connected to the holding tank while the unit is in operation. The unit must also be totally enclosed while in operation (as explained in example 1, p.G-2). A written spill prevention plan must be developed to

^{*} If any integrally recycled material is shipped as product (byproduct as product), item g. would reflect that quantity.

minimize risk of worker exposure, to prevent spills or leaks when connecting and disconnecting or operating the recycling equipment.



Description of sample process: The quantities in the diagram show the yearly amounts of byproduct produced and material processed. Because the unit is integrally connected, the recycled chemical is not reported as an input to the process and spent chemical piped to the recycling unit, is not considered byproduct. If any of the recycled solvent can not be used in the process, and is shipped off-site for reuse without any treatment or recovery, it would be considered byproduct as product and reported in Section 1 item g. of the Form S "Shipped in or as Product." (See section on Byproduct as Product, p.G-6.)

For this example of Integral Recycling, the Form S, Section 1 would be filled out as follows:

c. Manufactured: 0 d. Processed: 0

e. Otherwise Used: 25000 f. Generated as Byproduct: 25000

g. Shipped in or as Product: 0*

* If any integrally recycled material is shipped as product (byproduct as product), Section 1 item g. would reflect that quantity.

BYPRODUCT AS PRODUCT

A byproduct that is product means a byproduct that is used as a raw material without treatment or processing. If a byproduct is treated before it is used as a raw material, then it is not a product. For TURA purposes, byproduct as product should be listed as a product of the production unit. For example, some recycled paints or solvents can be sold to buyers who can use them as they are. While these would not be counted as byproducts, they would need to be counted in the amount of the chemical shipped off-site as product.

BYPRODUCT AS PRODUCT REPORTING UNDER TURA

Chemical amounts being reported as byproduct as product must be listed in the Form S cover sheet in section 4 as a second product for that production unit. Therefore, at least two products will be listed in any production unit that produces byproduct as product.

	Are all chemicals only u units associated with the	sed to treat wastewater? is facility).	Yes ☐ No 🗵	(if yes, then there	e are no production			
01 a. Production Unit a	b. Describe the Pro	cess:						
is this production unit IN USE for the reporting year of this	Degreasing metal p	arts						
submittal?	c. Describe the Pro	duct:						
☐ yes ☐ no		Cleaned metal parts and recycled solvent						
	Enter up to 4 four-digit \$\frac{3449}{\text{d. SIC Code}}	e. SIC Code		from this Production	g. SIC Code			
	h. Check the appr	opriate description for the	unit of product:					
	☐ area ☐ dollar	☐ hours ☐ kilowatt 区] length N/A	N ☐ number ☐ v	olume 🗌 weight			
	<u>01</u>							
	NON-INTEGRAL RECY	'CLING (ON-SITE)						
	or other containers a	t material is removed from not considered integral from the production	gral under this	policy. To be o	considered			

✓ Example: 4

recycling unit.

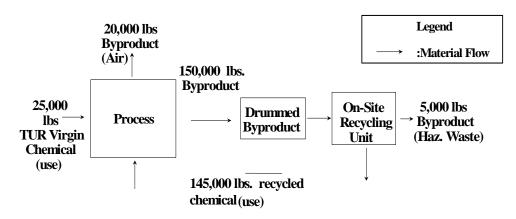
Non-integral, On-Site Recycling Reporting: Many companies have non-integral recycling operations on-site. Their processes include drumming and transporting the material to a different location in the plant at some point during the operation. Although these recycling processes are not considered "integral recycling," TURA and this guidance recognize on-site, non-integral recycling as follows: Companies practicing on-site, non-integral recycling are required to count the recycled chemical as byproduct each time it exits the production unit. Additionally, each time the recycled material is re-introduced as an input to the production unit, it should be

recycling unit or into a directly connected holding tank, and then to a directly connected

added to chemical use quantities at the production unit level, but not to the facility-wide use levels. Therefore, any type of on-site recycling is not counted towards facility-wide use of the chemical, and will result in a reduction in the facility-wide total usage number.

✓ Example: 4 Con't

Non-Integral Recycling Example (on-site) Quantities based on yearly totals



Description of Sample Process: Each year, 25,000 lbs of virgin chemical plus 145,000 lbs of recycled chemical are added to the process (inputs). Each year 20,000 lbs of byproduct are released to the air and 150,000 lbs of spent chemical is drummed and brought to the on-site recycling unit. The recycling unit generates 5,000 lbs of hazardous waste. The quantities in the diagram show the yearly amounts of byproduct produced and materials processed. Because this is on-site non-integral recycling, the 145,000 lbs of recycled chemical is not counted towards facility-wide use, but is counted toward chemical use at the production unit level.

For this example of a company performing Non-Integral On-Site Recycling, the Form S, Section 1, would be filled out as follows:

c. Manufactured: 0 d. Processed: 0

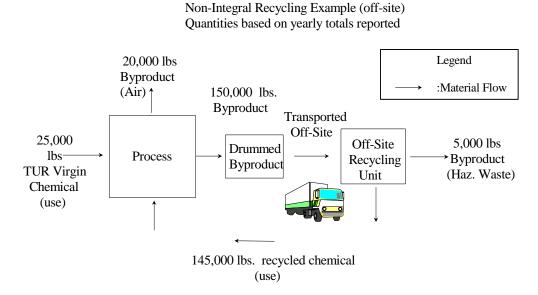
e. Otherwise Used: 25000 f. Generated as Byproduct: 175000

g. Shipped in or as Product: 0*

This example, when compared to the non-integral off-site recycling example below, demonstrates how facility-wide input numbers are minimized with non-integral, on-site recycling. It should be noted on the Form S, in Section 2, that on-site recycling has affected the materials balance for this chemical.

✓ Example: 5

Non-Integral Off-Site Recycling Reporting: Activities where materials are sent off-site for recycling are not considered integral under this guidance. Materials recycled off-site and re-introduced into the process, must be counted as byproduct and use both at the facility-wide and production unit levels. This can add significantly to the amount of chemical brought on-site and reported as facility-wide chemical use.



Description of Example Process: Each year, 25,000 lbs of virgin solvent plus 145,000 lbs of recycled solvent are added to the process (inputs). Each year, 20,000 lbs of byproduct are released to the air and 150,000 lbs spent chemical is drummed and shipped off-site to a company which recycles spent solvent. This off-site recycling unit generates 5,000 lbs of hazardous waste. The quantities in the diagram show the yearly amounts of byproduct produced and material processed. Because of this off-site non-integral recycling, the recycled chemical, as well as the virgin chemical, must be counted as inputs to the process. Additionally, the spent chemical, as well as the byproduct emitted to the air, must be counted as byproduct. The 5,000 lbs of hazardous waste byproduct is neither generated nor reported by this facility.

For this example of a company performing Non-Integral Off-Site Recycling, the Form S, Section 1, would be filled out as follows:

c. Manufactured: 0 d. Processed: 0

e. Otherwise Used: **170000** f. Generated as Byproduct: **170000**

g. Shipped in or as Product: 0*

✓ Example 1: Integral Recycling

- The recycling unit is integral to the process, and therefore exempt from 310 CMR 30.000.
- The recycling unit does not need a recycling permit.
- The byproduct generated from the recycling unit is managed as:
- 1. Hazardous waste, and as such, counts towards hazardous waste generator status

or

 Class A regulated recyclable material (notification "permit" required, 310 CMR 30.212)

✓ Example 2: Integral Recycling with Portable Recycling Unit

- The recycling unit is integral to the process, and therefore exempt from 310 CMR 30.000.
- The recycling unit does not need a recycling permit.
- The byproduct generated from the recycling unit is managed as:
 - 1. Hazardous waste, and as such, counts towards hazardous waste generator

status

or

 Class A regulated recyclable material (notification "permit" required, 310
 CMR 30.212)

✓ Example 3: Integral Recycling Incorporating Holding Tank

- The holding tank is regulated as a hazardous waste accumulation container, subject to generator standards for tanks (310 CMR 30.205(19)).
- The facility's generator status calculation includes the amount fed into the holding tank.
- The recycling unit is regulated as a hazardous waste recycling unit, and therefore needs a Class A or Class B (4) recycling permit (310 CMR 30.212 or 30.213(4))

✓ Example 4: On-Site Non-Integral Recycling

- Hazardous waste regulations apply to the drummed byproduct.
- Rate of generation includes the amount of byproduct drummed.
- Hazardous waste recycling permit is required.

✓ Example 5: Off-Site Non-Integral Recycling

- Hazardous waste regulations apply to the drummed byproduct.
- Rate of generation includes the amount of byproduct drummed.
- Hazardous waste recycling permit is required for the generator and the recycling facility.

ASSOCIATED HAZARDOUS WASTE ISSUES

GENERAL COMPLIANCE ISSUES

RECYCLING VS. TREATMENT

In order for an activity to qualify as "integral recycling," the material must be recycled or reused, not treated. From the TURA perspective, this is important because the statutory language refers to "recycling, reuse, or extended use of toxics..." and also because the statutory definition of toxics use reduction specifically excludes anything that is, or that promotes, "end-of-pipe treatment." From the hazardous waste perspective, this is important because treatment activities require licenses under both M.G.L.c. 21C and RCRA.

In order to be consistent with RCRA, the following criteria apply when determining whether an activity constitutes recycling: *

- □ Is the secondary material as effective as the raw material it replaces?
- □ Can the secondary material be fed directly into the process or is reclamation required?
- ☐ How much of the secondary material is used as compared to the analogous raw material?
- □ Is the secondary material managed in a manner consistent with the raw material?
- ☐ Are the toxic constituents actually necessary to the product or are they just "along for the ride"

^{*}These criteria are taken from the Federal Register (FR), 53 FR at 522, 52 FR at 17013 and 50 FR at 638.

INHERENTLY WASTE-LIKE MATERIAL

The preceding guidance does not apply to those hazardous wastes listed as F020, F021, F022, F023, F026, F028, since those hazardous wastes are inherently waste-like and must be managed as a hazardous waste, pursuant to the definition of hazardous waste contained at 310 CMR 30.000. Furthermore, those inherently waste-like wastestreams cannot be managed as regulated recyclable materials, since there is no exemption provided in 310 CMR 30.200 for those materials. However, there may be circumstances in which the "treatment that is integral..." exemption, cited in 310 CMR 30.000, might apply and in fact, exempt these wastes from hazardous waste regulations.

STATE-ONLY VS. EPA

Concerning other hazardous waste regulatory compliance issues, a TURA filer must keep in mind that since some hazardous waste activities are regulated on a state-only basis, for these wastes, MassDEP can exert a measure of discretion in policy-making. However, other activities are regulated by both MassDEP and EPA, and in these circumstances, MassDEP's discretion is generally more limited to federal rulings. For example:

- Characteristic sludges and byproducts being reclaimed are regulated by MassDEP only, and can be managed as hazardous waste, or if being reclaimed, they can be managed as a regulated recyclable material.
- Listed sludges and byproduct being reclaimed are regulated by both EPA and MassDEP.
- Spent materials being reclaimed on-site are regulated by both EPA and MassDEP.

OTHER STATE AND FEDERAL LAWS OR REGULATIONS

This guidance does not relieve those responsible for these "recycling activities" from regulatory responsibility contained in any other applicable state or federal laws or regulations. It is incumbent upon the responsible parties to conduct the recycling activities at all times in a manner that is protective of public health, safety, and the environment. To that end, MassDEP reserves its rights pursuant M.G.L. c. 21C, and M.G.L. c. 21I, to review and evaluate any such activity, on a case-by-case basis, and to require persons or entities managing these activities to comply fully with these laws.

Appendix H

GUIDANCE FOR USING THE TURA PRODUCTION PROCESS CODES

This appendix explains how to use the new standardized codes to describe the production processes included in your production unit(s).

Under TURA, the "production unit" [defined as the process(es) used to produce a product] is the basic unit for reporting and planning. In its regulations, MassDEP chose to give firms flexibility over how they designate their production units. The rationale was that firms are better suited to determine meaningful product and process combinations than are the regulators.

In TURA reporting, firms list their production units (as they chose to define them) in the Form S Cover Sheet -- identifying the products using one or more four digit SIC codes and describing the processes in their own words. MassDEP amended the TURA regulations (310 CMR 50.30) to incorporate reporting on production processes using generic codes.

This Appendix describes how and why the codes were developed and then explains how to use them to report information on the Form S Cover Sheet. (See page H-9 for the annotated list of the codes.)

Do the codes require that a firm make changes in the way it defined its production unit?

No. The coding system is intended to maintain the traditional flexibility firms have been given in grouping products and processes into production units. No change in how firms define their production units is required. The codes are generic enough that most firms should only need a few codes to describe their processes.

Why were these codes developed?

The standardized process codes were developed, in large part, because of differences in the way similar processes were described by different companies. MassDEP wants to retain the flexibility given to firms in designating production units. We also need to identify, however, the similarities and differences in processes as part of potentially developing user segment regulations.

The coding system is intended to be used to group the 800+ processes reported each year into broad categories based on similarities and differences in such things as: 1) processes, 2) chemical use, 3) byproduct production, and 4) opportunities for TUR. Alpha-numeric codes have been assigned to each generic category.

✓ Example 1: Off-Site Non-Integral Recycling

Each year, a number of firms report deionization of water as a production unit, although the way they describe this process varies. Some refer to it as "D/I Unit," others report only the "regeneration of resins for deionization," etc.

These firms represent a variety of industries, including paper making, pharmaceuticals, electroplating, and co-generation of steam. With the coding system, these firms would uniformly report HH-01 for deionizing water. Once this code is entered into the computer system, MassDEP can run a report, for example, to determine what TUR techniques have been adopted. Any promising developments in one industry can be researched for potential applicability in other industries.

MassDEP has, in fact, seen examples where technology transfers look promising. One TURA filer, primarily a chemical manufacturer, uses electroplated copper powders or flakes as a component in its products. That firm has developed an electroplating process that eliminates the need to use cyanide compounds. Although the process is patented, its development in one industry suggests the potential for technology transfer to traditional electroplating firms.

HOW TO USE THE PRODUCTION PROCESS CODES

Shown below is an excerpt from the **Form S Cover Sheet** showing the top half of Section 4, and calls for identifying the production unit by number, describing the processes involved, describing the product etc.

A PRODUCTION UNIT is best thought of as the combination of the process (or activities) used to produce a product or service and the product or service. In this section, please identify the PRODUCTION UNITS

Section 4: Facility-Wide Listing of Production Units

at the facility, then use the production unit number to report on chemical use in the Form S. If there has been a substantial change in a PRODUCTION UNIT from the previous reporting year, the PRODUCTION UNIT must be given a new, unique number. Are all chemicals only used to treat wastewater? Yes \(\scale \) No \(\scale \) (if yes, then there are no production units associated with this facility). b. Describe the Process: a. Production Unit # is this production unit IN USF for the reporting year of this c. Describe the Product: submittal? Enter up to 4 four-digit SIC Codes that best describe the Product from this Production Unit: d. SIC Code f. SIC Code e. SIC Code g. SIC Code h. Check the appropriate description for the unit of product: area dollar hours kilowatt length N/A number volume weight

Where the form calls for information concerning the process, a firm should describe any process step that involves a TURA-reported chemical as an input, output or throughput.

A firm need NOT describe a process step that does not involve a TURA chemical. For example, a juice manufacturer would not have to describe mixing as a process step unless a TURA chemical being reported this year was involved. Another manufacturer that mixed food grade acetic acid to produce salad dressing would report the mixing step.

MassDEP does not expect extremely detailed descriptions of process steps and in the past most firms have described their processes in sufficient detail. More specific descriptions, however, will help MassDEP identify similarities and differences in the production processes of firms.

✓ Example 2: Off-Site Non-Integral Recycling

Instead of describing process as "household appliance manufacturing," it would be more helpful if the firm reported "spray coating and assembly of household appliances."

After describing the process, a firm describes the product and enters the four-digit SIC code(s) that best describes that product. Then the unit of product is described in narrative fashion. (See page 23 of the reporting instructions for more detailed information on completing the first part of Section 4.)

Using the standardized process codes

Shown below is that part of Section 4 that calls for firms to enter the appropriate standardized process codes.

Production Process Step Information For This Production Unit

 Enter the production process codes to identify the process steps that involve TURAreportable chemicals as an input, output or throughput. (See the reporting guidance document for the list of production process codes and instructions on when a given code needs to be listed.)

	Process Code	2.	Process Code	3.	Process Code	4.	Process Code
!	Process Code	6.	Process Code	7.	Process Code	8.	Process Code
•	Process Code	10.	Process Code	11.	Process Code	12.	Process Code
	Process Code	14.	Process Code	15.	Process Code	16.	Process Code
	Process Code	18.	Process Code	19.	Process Code	20.	Process Code
•	Process Code	22.	Process Code	23.	Process Code	24.	Process Code

To complete this part of the cover sheet, firms need to determine which production process code(s) best describe their activities. Note that the production process codes (which begin on page H-9) have been divided into three groups.

Note: There are some firms that may have to review the codes in all the groups. This might occur, for example, with a textile manufacturer that not only dyes fabric but also formulates the dye using a chemical reaction.

Note: The examples and cross - references provided by MassDEP are based upon the agency's best understanding of production processes as described in TURA reports submitted in previous years.

With the first two groups, a distinction has been drawn between production processes generally used to provide services or make (or process) <u>objects</u> (Group 1) and those processes typically associated with the manufacture of <u>chemicals</u> (Group 2).

Group 1 contains processes that typically are used by firms that primarily make or process objects and goods (or provide services).

Group 2 is designed primarily for use by firms that manufacture or process chemicals. (Mainly firms in SIC code 28, 29, 30, some firms in 33 who recover metals, and chemical distributors.)

Group 3 lists miscellaneous processes that might be used by any firm, regardless of whether services are provided, goods are made, or chemicals produced.

DETERMINING WHICH PROCESS GROUP LIST TO USE

If your firm primarily makes or processes objects (or provides services) look first at the codes in Groups 1 and 3. If there are codes on these lists that adequately describe your processes, you need not evaluate or report any of the chemical process codes in Group 2. Similarly, a firm that primarily manufactures or processes chemicals should first look at Groups 2 and 3 for applicable codes.

If your firm makes and processes objects (or provides services) and there is no code in Group 1 or Group 3 that adequately describes your process, you should then check the Group 2 codes. There <u>may</u> be a generic chemical process code that you can use. If you have questions, you can call MassDEP at (617) 292-5711.

For many firms, using the process code lists should be straightforward. MassDEP does recognize, however, that questions and issues of interpretation of the codes may arise. To assist TURA reporters, MassDEP has included examples or other comments in the attached list of codes.

The examples and cross-references are intended ONLY as a guide; each filer is encouraged to use its own best judgment concerning which codes to use. There are, however, some general principles for using the production process codes.

Appendix H - 5

¹ Many process steps in **Group 1** are themselves chemical reactions. For example, electroplating is an oxidation/reduction reaction. An electroplating firm, however, would enter one of the codes for electroplating (AA-12 or AA-13, for example). The firm would NOT enter the **Group 2** code (EE-07) for oxidation/reduction reactions.

1. Each generic process code refers to the specific steps (or unit operations) normally associated with that process.

✓ Example: 3

A textile manufacturer reports "acid aging," not as a bleaching process but as a step by which dyes are chemically activated. That manufacturer would use the code AA-22 Pigmentation and Dyeing for "acid aging" and all other steps normally associated with dyeing.

2. If a number of process steps can be categorized by one code, that code should be entered ONLY once for a given production unit.

✓ Example: 4

A tool manufacturer cuts, drills, and turns metal to produce hand tools. Generally all those processes can be classed as BB-05 Removal by Mechanical Means (Gross Mass Removal). The code BB-05 would be entered once for all those operations if they all are included in a given production unit. (If the firm had a second production unit with the same three processes, BB-05 would be reported for that production unit as well.)

3. Use all the codes that apply.

✓ Example: 5

Electroplating as a generic process includes a product cleaning step. The appropriate code for electroplating should be reported, as well as the appropriate product cleaning code.

4. Using the "not otherwise specified" codes.

The production processes are generally placed in subgroups, such as the "Product Molding and Forming" subgroup which includes CC-01 (Casting and Molding), CC-02 (Extrusion and Drawing) CC-03 (Forging), etc.

In some groups, the last code contains the abbreviation N.O.S. for "not otherwise specified." This code should be used for processes that cannot be categorized into one of the codes above it in the subgroup.

What do I do if a process is not adequately described by a listed code?

After looking at Group 1 and 3 codes, a firm that makes or processes objects should next look at the Group 2 chemical reaction codes. If one of those codes apply, use it. If no code truly seems to apply, a firm should use its best judgment to determine which coded process is "most like" the activity being reported.

✓ Example: 6

In the plastics industry there is a relatively new process for forming products known as "pultrusion." With this process, heated plastic is pulled through a die that gives it a specific shape. Assume no existing code is applicable.

Looking over the **Group 1** list, however, the annotations indicate that CC-02: Extrusion and Drawing are processes that give a specific shape to a product by forcing it through a die. "Pultrusion" could be considered "most like" extrusion because a die is used to give shape to a product, even though the plastic is pulled, not pushed.

✓ Example: 7

A food manufacturer uses a TURA-reportable chemical to "fumigate" its facility. Assume that there is no code that covers this process. There are, however, two processes that are similar: FF-04: Equipment Cleaning (Solvent-Based) (includes sanitizing) and HH-02 Process Water Treatment – Biocides and Disinfection (which includes chlorination).

This firm would have to use its best judgment as to which code "fumigation" is most like. If the fumigant used is a solvent, the equipment cleaning code could be viewed as the most applicable. As this example illustrates, there is not necessarily any one "right" answer for which process code is most like "fumigation."

Reporting on the chemicals associated with a production unit

Each production unit may be associated with one or more chemicals. In the last part of section 4, firms list the particular chemical(s) that are associated with the given production unit. There is a space for the chemical name and the chemical abstract service (CAS) number. (If there is no CAS number, leave that line blank.) The form then asks whether the chemical listed is associated with all the process steps coded above. If so, check "YES" and no process codes need to be entered for the chemical. If

the chemical is associated with some but not all of the processes, the appropriate process codes should be listed.

To illustrate Section 4 reporting, consider a firm that makes jewelry which reports two chemicals: trichloroethane (used to clean jewelry) and ammonia (used in etching).

The cleaning step would be BB-01: Product Cleaning - Solvent-Based, and the etching process would be BB-04: Removal by Chemical Means. This firm would report as shown below.

✓ Example 8: Production Units

. Production Unit #	b. Describe the Process:						
this production	Cleaning and etching and jewelry						
nit IN USE for ne reporting ear of this ubmittal?	c. Describe the Product:						
	jewelry						
E	nter up to 4 four-digit SIC Codes that best describe the Product from this Production Unit:						
	3961 g. SIC Code d. SIC Code f. SIC Code Code						
	h. Check the appropriate description for the unit of product:						
	one of the appropriate accompliant and anim or product						
	☐ area ☐ dollar ☐ hours ☐ kilowatt ☐ length ☐ N/A ☒ number ☐ volume						
	☐ area ☐ dollar ☐ hours ☐ kilowatt ☐ length ☐ N/A ☒ number ☐ volume						
√Exan	☐ area ☐ dollar ☐ hours ☐ kilowatt ☐ length ☐ N/A ☒ number ☐ volume						
	☐ area ☐ dollar ☐ hours ☐ kilowatt ☐ length ☐ N/A ☒ number ☐ volume ☐ weight						
Producti i. Ente chemical	area dollar hours kilowatt length N/A number volume weight						
i. Ente chemical production	area dollar hours kilowatt length N/A number volume weight nple 8: Production Units (Con't) ion Process Step Information For This Production Unit r the production process codes to identify the process steps that involve TURA-reportable is as an input, output or throughput. (See the reporting guidance document for the list of						
i. Ente chemical production	area dollar hours kilowatt length N/A number volume weight nple 8: Production Units (Con't) ion Process Step Information For This Production Unit r the production process codes to identify the process steps that involve TURA-reportable is as an input, output or throughput. (See the reporting guidance document for the list of on process codes and instructions on when a given code needs to be listed.)						
i. Ente chemical production	area dollar hours kilowatt length N/A number volume weight Process Code Process Code						
i. Ente chemical production	area dollar hours kilowatt length N/A number volume weight Inple 8: Production Units (Con't)						

21.			22			— 23. ·			– 24. –		
21.	Process C	Code	22.	Process Co	ode	25.	Process Co	de	24. I	Process Co	de
ALL the	List the TURA-reportable chemicals associated with this production unit. If a chemical is associated with ALL the process steps entered in i. above, check ALL. If a chemical is associated with some but not all of the process steps, check the numbers that correspond to the process codes entered in i. above (i.e. box 1										
		ds to the								(
j. Producti	•	01	•			,					
unit		Prod. Unit	#								
k. TURA		71556		TR	ICHLOR	OETHAN	ΙE				
Che	mica	CAS#		Che	emical Nam	е					
Check "	All" or the	number	s that cor	respond	to the pro	ocess co	des entere	ed in i.			AII.
1. 🛛	2.	3. 🗌	4.	5.	6.	7.	8. 🗌	9.	10.	11.	12.
13.	14.	15. 🗌	16.	17.	18.	19.	20.	21.	22.	23.	24.
ı TURA		7664417	,	Λ.N.	IMONIA						
•	mica	CAS #			emical Name	e					
						_					_
Check "/	All" or the	number	s that cor	respond	to the pro	cess co	des entere	ed in i.			AII. 🔛
1. 🗌	2. 🔀	3. 🗌	4.	5.	6.	7.	8. 🗌	9. 🗌	10.	11. 🗌	12.
13.	14.	15. 🗌	16.	17.	18.	19. 🗌	20.	21.	22.	23.	24.

TURA PRODUCTION PROCESS CODES

Group 1: Processes Typically Used by Firms that Make and Process Objects or Provide Services

General Guide to Group 1 Process Codes: Codes with the prefix "AA" <u>generally</u> refer to processes that add coatings or other matter to a product. The "BB" codes refer to processes that remove matter from a product. The "CC" codes represent processes by which products are given form, shape, physical dimension or other physical properties.

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
Coating & Painting Processes	Note: firms that use extrusion to coat objects should use the Extruding/Drawing (CC-02)
AA-01: Dip, Flow & Curtain Coating	Example: processes where excess coating material is allowed to flow or drain off
AA-02: Spray Coating	Example: applying coating as a fine mist or spray

	1
	Note, however, electrostatic spray coating is included under AA-04 rather than this code
AA-03: Knife/Spread/Roll Coating	Example: using a roller, doctor knife or brush to apply coating
AA-04: Electrostatic Coating Methods	Examples: electrostatic spray coating, electrostatic powder coating, electrocoating
Printing Processes	
AA-05: Letterpress & Flexographic	Example: ink applied to a raised surface of printing plate
AA-06: Lithographic	Example: ink adheres to hydrophobic area/fountain solution adheres to hydrophilic area
	Use this code to describe the lithographic processes used in semiconductor and printed circuit board manufacturing
AA-07: Gravure	Example: ink remains in recessed areas of the plate
	Includes gravure coating as well as printing
AA-08: Screen Printing	Example: ink forced through open or porous areas of screen or plate
AA-09: Pad Printing	Example: use of a silicone pad to transfer ink from etched/engraved plate to work piece
AA-10: Printing Using Carrier Films or Foils	Examples: hot stamping, in-mold decorating of plastics using films or foils
AA-11: Jet Printing	Example: use of jet(s) to apply text or a pattern
Plating Processes	
AA-12: Electroplating (Barrel) AA-13: Electroplating (Rack)	
AA-14: Electroless (Barrel) AA-15: Electroless (Rack)	
AA-16: Mechanical Plating	Example: coating a substrate by tumbling or other mechanical means, e.g., using metal powders
AA-17: Hot Dip Coating (of metal)	Examples: galvanizing, hot tin dipping

Processes that penetrate surface layer	
AA-18: Anodizing, Conversion Coating and Case Hardening (through diffusion)	Examples: anodizing, black oxide conversion, bright dipping, chromating, passivating, phosphating
	Includes case hardening through diffusion of substances in the surface layer of metal (e.g., nitriding, nitrocarburizing) For case hardening through the application of energy/heat, see CC-04
AA-19: Deposition	Examples: vacuum metallizing, sputtering, metal (flame) spraying
Processes that add material throughout the mass of a product	
AA-20: Pigmentation/Dyeing	
AA-21: Infiltration/Saturation	Example: kraft paper saturation
AA-22: Impregnation/Implantation	Examples: (from semiconductor industry) - doping (through diffusion), ion implantation, vacuum impregnation
Processes that remove material from product	
Product or Parts Cleaning	Removing dirt, grease and other foreign matter from product
	For drying that occurs as part of cleaning use BB-09
BB-01: Solvent-Based	
BB-02: Aqueous	Includes rinsing
BB-03: Mechanical	Examples: sand blasting, cleaning with saw dust
Removal of Mass from Substrate (excluding Cleaning)	
BB-04: Removal by Chemical Means	Includes bleaching (in textiles), chemical stripping, electropolishing, etching, pickling (of metals)
BB-05: Removal by Mechanical Means (Gross Mass Removal)	Includes processes that remove pieces or chips from product; can include cutting, drilling, lathing, turning
BB-06: Removal by Mechanical Means (<u>Fine Mass</u> Removal/Size Reduction)	Includes removal methods that produce fine particles/dust;

	1
	can include abrasive blasting, grinding, milling, polishing (processes that smooth the surface without removing material should be reported as CC-06)
BB-07: Removal by Chemical and Mechanical Means	Example: (in paper making) pulping where mechanical and chemical processes are used
BB-08: Removal by Application of Heat or Energy	Example: laser cutting
BB-09: Drying NOS	Drying not otherwise specified; includes chemical drying
Product Molding/Forming	
CC-01: Casting/Molding	Includes all forms of casting, injection molding, blow molding and similar processes
CC-02: Extrusion/Drawing	Includes processes by which a product is given shape by pushing material through a die or similar device Firms that coat products by extrusion should use this code
CC-03: Forging	
CC-04: Heat Treating NOS	Examples: controlled heating of metal to increase or decrease hardness, improve machinability, relieve stresses etc. (annealing, austempering, tempering and case hardening)
CC-05: Quenching	Example: rapid cooling after heat treating through contact with liquids, gases or solids
CC-06: Forming by Mechanical Means NOS	Forming by Mechanical Means not otherwise specified Examples: bending, cold heading, embossing, rolling
Bonding/Joining	
CC-07: Application of Adhesives	
CC-08: Soldering/Brazing	
CC-09: Welding	
CC-10: Sintering/Powder Metallurgy	
CC-11: Joining through Application of Heat/Energy NOS	Joining through Application of Heat/Energy not otherwise specified

CC-12: Joining through Chemical Means NOS	Joining through Chemical Means not otherwise specifed
CC-13: Joining through Mechanical Means NOS	Joining through Mechanical Means not otherwise specified Examples: cladding

TURA PRODUCTION PROCESS CODES

Group 2: Production Processes Typically Used by Firms that Manufacture and Process Chemicals

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
SEPARATION/REFINING	
DD-01: Centrifuge/Filtration	
DD-02: Distillation	
DD-03: Drying	
DD-04: Extraction	
DD-05: Precipitation	
DD-06: Refining/Purification	
DD-07: Smelting	
CHEMICAL REACTIONS	
EE-01: Acetalization	
EE-02: Condensation	
EE-03: Curing, Vulcanizing, Cross Linking	
EE-04: Dehydrogenation	
EE-05: Esterification	

EE-06: Hydrogenation	
EE-07: Oxidation/Reduction	
EE-08: pH Adjust	
EE-09: Polymerization	
EE-10: Substitution Reactions	Includes halogenization and chlorination
EE-11: Chemical Reactions NOS	Chemical Reactions not otherwise specified

TURA PRODUCTION PROCESS CODES

Group 3: Miscellaneous Processes that could be used by any firm

PROCESS and PROCESS CODE	COMMENTS and EXAMPLES
Production Equipment Cleaning	Examples: cleaning of vessels, process lines, printing plates, such devices as spray guns. Also includes descaling of boilers NOTE: Equipment cleaning includes SANITIZING
FF-01: Solvent-Based	
FF-02: Aqueous	Example: use of caustic solutions to clean production equipment
FF-03: Mechanical	Example: use of wiper blades, squeegees
Materials Storage/Handling	
GG-01: Blending, Mixing, Compounding	
GG-02: Particle Size Reduction	Example: grinding mills
GG-03: Packaging/Filling	Examples: bottling liquid products, repackaging
GG-04: Materials Storage/Handling NOS	Materials Storage Handling not otherwise specified Use for storage and handling processes that generate losses such as spills or evaporative losses

Treatment of Process Water	
HH-01: Deionization, Demineralization	Examples: deionization, water softening, including associated process like regeneration of deionization resins
HH-02: Use of Biocides/Disinfection	Examples: water chlorination, use of algaecides in cooling towers
HH-03: pH Control of Process Water NOS	pH Control of Process Water (including water in boilers), not otherwise specified
Refrigeration/Temperature Control	
II-01: Refrigeration	
II-02: Heat Exchange Unit	
II-03: Contact Cooling NOS	Contact Cooling not otherwise specified Do not use for quenching. Quenching is CC-05
II-04: Noncontact Cooling NOS	Noncontact Cooling not otherwise specified
Power Generation	
JJ-01: Production of Electricity, Steam, Facility Heat	Applies to processes producing electricity, steam or heat through combustion, includes co-generation
	Note: use an FF code for equipment cleaning associated with power production and a HH code for treatment of cooling or boiler water

TURA PRODUCTION PROCESS CODES: Alphabetized List of Group 1 and 3 Processes (cross-referenced to recommended codes)

MassDEP has prepared the following alphabetical listing of some of the more commonly reported production processes with cross-references to the recommended codes in pp. H-15 thru H-23. This appendix explains how to use generic codes to report on production processes in the Form S Cover Sheet. The alphabetical list covers selected processes from Groups 1 and 3 of the codes in pp. H-15 thru H-24.²

² In pp. H-15 thru H-24, the codes are divided into three groups: Group 1 lists processes typically used by firms that primarily make or process objects (or provide services). Group 2 lists processes typically used by firms that are primarily in the chemical manufacturing SIC codes. Group 3 lists miscellaneous processes that might be used by any firm regardless of whether objects or chemicals are made/processed (or services provided).

(Firms that are primarily in the chemical manufacturing SIC codes should also refer to the Group 2 codes on page H-12. The processes associated with chemical manufacturing are not included in this alphabetical list.)

Pages H-15 thru H-24 should also be consulted to confirm the applicability of a code. While the appendix and this list are intended to provide guidance, each filer is encouraged to use his or her best judgment concerning which code(s) adequately describes its processes.

IMPORTANT NOTE ON THE "MOST LIKE" AND "NOT OTHERWISE **SPECIFIED" CODING:**

On pages H-15 thru H-24, the codes are divided into subgroups, such as CC-01 through CC-06 for the product molding and forming codes. Some of the subgroups contain one or more codes containing the abbreviation "NOS" for "not otherwise specified."

Each NOS code is a default code for its group. For example, CC-06 (Forming by Mechanical Means NOS) should be used for any mechanical product forming process other than those specifically-named in its group (e.g., casting, molding, extrusion, etc.) The use of the "most like" coding method (described on p. H-6) should only be used as a last resort, i.e., if there is no applicable code, NOS or otherwise.

ALPHABETICAL LISTING OF PRODUCTION PROCESSES

Process Step	Cross-Reference / Comment
abrasive blasting	see codes listed below under "removal of mass from substrate"
acid aging	see AA-20 (Pigmentation/Dyeing), for acid aging as a step in dyeing
annealing	see <u>CC-04</u> (Heat Treating NOS)
anodizing	see AA-18 (Anodizing, Conversion Coating & Case Hardening [through diffusion])
application of adhesives	see CC-07 (Application of Adhesives - Bonding/Joining)
aqueous-based cleaning	see <u>FF-02</u> (Aqueous Cleaning of Production Equipment) of production equipment
aqueous-based cleaning	see <u>BB-02</u> (Aqueous Cleaning of Product or Parts) of work product
austempering	see <u>CC-04</u> (Heat Treating NOS)
bending	see CC-06 (Forming by Mechanical Means NOS)

black oxide see AA-18 (Anodizing, Conversion Coating & Case

Hardening conversion coating [through diffusion])

blanking see codes listed below under "removal of mass from

substrate"

bleaching see <u>BB-04</u> (Removal by Chemical Means)

blending see <u>GG-01</u> (Blending, Mixing, Compounding)

blow molding see <u>CC-01</u> (Casting/Molding)

bonding/joining see as appropriate:

CC-07 (Application of Adhesives)

CC-08 (Soldering/Brazing)

CC-09 (Welding)

<u>CC-10</u> (Sintering/Powder Metallurgy)

<u>CC-11</u> (Joining through Application of Heat/Energy NOS)

<u>CC-12</u> (Joining through Chemical Means NOS) CC-13 (Joining through Mechanical Means NOS)

boring see codes listed below under "removal of mass from

substrate"

bottling liquid products see <u>GG-03</u> (Packaging/Filling)

brazing see <u>CC-08</u> (Soldering/Brazing)

bright dipping see AA-18 (Anodizing, Conversion Coating & Case

Hardening [through diffusion]) if bright dipping is

intended to alter the chemical structure of the workpiece's

surface

see <u>BB-04</u> (Removal by Chemical Means) if bright dipping is intended to remove mass from the workpiece

broaching see codes listed below under "removal of mass from

substrate"

brush-on coating see <u>AA-03</u> (Knife/Spread/Roll Coating)

buffing see as appropriate:

CC-06 (Forming by Mechanical Means NOS), if the

process is not intended to remove material from the work

piece

codes listed below under "removal of mass from

substrate," if the process is intended to remove material

from the work piece

burnishing see as appropriate:

<u>CC-06</u> (Forming by Mechanical Means NOS), if the process is <u>not</u> intended to remove material from the work

piece

codes listed below under "removal of mass from

substrate," if the process is intended to remove material

from the work piece

calendering see <u>CC-06</u> (Forming by Mechanical Means NOS)

case hardening see <u>AA-18</u> (Anodizing, Conversion Coating & Case

Hardening [through diffusion]), includes processes such as

nitriding

case hardening by heat treating

see <u>CC-04</u> (Heat Treating NOS)

casting see <u>CC-01</u> (Casting/Molding)

chemical drying see <u>BB-09</u> (Drying NOS), if chemical drying refers, for

example, to the use solvents for drying a work product

see DD-03 (Drying) for chemical manufacturers that dry

chemicals

chemical stripping see <u>BB-04</u> (Removal by Chemical

chromating see AA-18 (Anodizing, Conversion Coating & Case

Hardening [through diffusion])

cladding see <u>CC-13</u> (Joining through Mechanical Means (NOS)

leaning of production equipment see as appropriate:

<u>FF-01</u> (Solvent-Based Cleaning of Production Equipment)

FF-02 (Aqueous Cleaning of Production Equipment)

<u>FF-03</u> (Mechanical Cleaning of Production Equipment)

cleaning of work product see as appropriate:

BB-01 (Solvent-Based Cleaning of Product or Parts)

BB-02 (Aqueous Cleaning of Product or Parts)

BB-03 (Mechanical Cleaning of Product or Parts)

co-extrusion see <u>CC-02</u> (Extrusion/Drawing)

co-generation see <u>JJ-01</u> (Production of Electricity, Steam, Facility Heat)

cold heading see <u>CC-06</u> (Forming by Mechanical Means NOS)

compounding see <u>GG-01</u> (Blending, Mixing, Compounding

contact cooling see II-03 (Contact Cooling NOS) or quenching, however,

use CC-05 (Quenching)

conversion coating see AA-18 (Anodizing, Conversion Coating & Case

Hardening [through diffusion])

conveyorized degreasing see codes listed above under "cleaning of work product"

crystal growth see AA-19 (Deposition)

curtain coating see AA-01 (Dip, Flow & Curtain Coating)

cutting see codes listed below under "removal of mass from

substrate"

deburring see codes listed below under "removal of mass from

substrate"

degreasing see codes listed above under "cleaning of work product"

deionization see HH-01 (Deionization, Demineralization), includes the

regeneration of deionization resins (of process water)

demineralization see HH-01 (Deionization, Demineralization)

deposition see AA-19 (Deposition) use this code for processes that in

deposit thin films (usually of metal) and for crystal growth (includes metal [flame] spraying, sputtering, vacuum

metallizing)

descaling of boilers see codes listed above under "cleaning of production

equipment"

descaling of work product see codes listed below under "removal of mass from

substrate"

desmutting see codes listed below under "removal of mass from

substrate"

dip coating see AA-01 (Dip, Flow & Curtain Coating)

disinfection see <u>HH-02</u> (Treatment of Process Water: Use of

of process water Biocides/Disinfection)

doping (through diffusion) see <u>AA-22</u> (Impregnation/Implantation)

drawing see <u>CC-02</u> (Extrusion/Drawing)

drilling see codes listed below under "removal of mass from

substrate"

dry cleaning (of clothes) see codes listed above under "cleaning of work

product"

drying (of work product) see <u>BB-09</u> (Drying NOS)

dyeing see <u>AA-20</u> (Pigmentation/Dyeing)

electric power generation see <u>JJ-01</u> (Production of Electricity, Steam, Facility Heat)

electrocoating see <u>AA-04</u> (Electrostatic Coating Methods)

electroless plating (barrel) see <u>AA-14</u> (Electroless Plating [Barrel])

electroless plating (rack) see AA-15 (Electroless Plating [Rack])

electroplating (barrel) see <u>AA-12</u> (Electroplating [Barrel])

electroplating (rack) see AA-13 (Electroplating [Rack])

electropolishing see BB-04 (Removal by Chemical Means)

electrostatic coating methods see AA-04 (Electrostatic Coating Methods)

electrostatic powder coating see AA-04 (Electrostatic Coating Methods)

electrostatic spray coating see <u>AA-04</u> (Electrostatic Coating Methods

embossing see <u>CC-06</u> (Forming by Mechanical Means NOS)

equipment cleaning see codes listed above under "cleaning of

production equipment"

etching see <u>BB-04</u> (Removal by Chemical Means)

extrusion see CC-02 (Extrusion/Drawing)

filling see <u>GG-03</u> (Packaging/Filling)

flame and arc cutting see BB-08 (Removal by Application of Heat or

Energy)

flexographic printing see <u>AA-05</u> (Letterpress & Flexographic Printing)

flow coating see <u>AA-01</u> (Dip, Flow & Curtain Coating)

foam molding see <u>CC-01</u> (Casting/Molding)

forging see <u>CC-03</u> (Forging)

forming by mechanical

means NOS see <u>CC-06</u> (Forming by Mechanical Means NOS)

mechanical forming processe other than casting/molding (CC-01), extrusion/drawing (CC-02) or forging (CC-03)

galvanizing see as appropriate:

AA-17 (Hot Dip Coating of Metal)

AA-12 (Electroplating, Barrel) & AA-13 (Electroplating,

Rack), if galvanizing is by electroplating

gravure printing see <u>AA-07</u> (Gravure) gravure coating see <u>AA-07</u> (Gravure)

grinding see as appropriate:

codes listed below under "removal of mass from substrate"

<u>GG-02</u> (Particle Size Reduction) for grinding of chemicals, as in grinding of paint pigments

heat exchange unit see II-02 (Heat Exchange Unit)

heat treating see CC-04 (Heat Treating NOS)

hobbing see codes listed below under "removal of mass from

substrate

hot dip coating (of metal) see <u>AA-17</u> (Hot Dip Coating of Metal)

hot stamping see <u>AA-10</u> (Printing Using Carrier Films or Foils)

(printing)

hot tin dipping see AA-17 (Hot Dip Coating of Metal)

implantation see <u>AA-22</u> (Impregnation/Implantation)

impregnation see <u>AA-22</u> (Impregnation/Implantation)

in-mold decorating of plastics see <u>AA-10</u> (Printing Using Carrier Films or Foils)

using films or foils

infiltration see <u>AA-21</u> (Infiltration/Saturation)

injection molding see <u>CC-01</u> (Casting/Molding)

ion implantation see AA-22 (Impregnation/Implantation)

jet printing see <u>AA-11</u> (Jet Printing)

knife coating see <u>AA-03</u> (Knife/Spread/Roll Coating)

knife over roll coating see <u>AA-03</u> (Knife/Spread/Roll Coating)

kraft paper saturation see <u>AA-21</u> (Infiltration/Saturation)

laser cutting see <u>BB-08</u> (Removal by Application of Heat or

Energy)

lathing see codes listed below under "removal of mass from

substrate"

letterpress printing see <u>AA-05</u> (Letterpress & Flexographic Printing)

lithographic printing see AA-06 (Lithographic)

machining see codes listed below under "removal of mass from

substrate"

materials storage/handling see as appropriate:

<u>GG-01</u> (Blending, Mixing, Compounding)

GG-02 (Particle Size Reduction)

GG-03 (Packaging/Filling)

GG-04 (Materials Storage Handling NOS)

mechanical plating see <u>AA-16</u> (Mechanical Plating)

metal (flame) spraying see <u>AA-19</u> (Deposition)

milling see as appropriate: codes listed below under "removal of

mass from substrate"

GG-02 (Particle Size Reduction) as in the use of grinding

mills

mixing see <u>GG-01</u> (Blending, Mixing, Compounding)

molding see <u>CC-01</u> (Casting/Molding)

neutralization if neutralization is a step in a coded process, use that code

for that process, for example, if neutralization is a step in

dyeing, the appropriate code would be AA-20

(Pigmentation/Dyeing)

if neutralization is used in the manufacture of a chemical,

use <u>EE-08</u> (pH Adjust)

nitriding see <u>AA-18</u> (Anodizing, Conversion Coating & Case

Hardening [through diffusion])

nitrocarburizing see <u>AA-18</u> (Anodizing, Conversion Coating & Case

Hardening [through diffusion])

noncontact cooling see <u>II-04</u> (Noncontact Cooling NOS) (where cooling fluid

is kept separate from the production process)

packaging see <u>GG-03</u> (Packaging/Filling)

pad printing see <u>AA-09</u> (Pad Printing)

particle size reduction see GG-02 (Particle Size Reduction), for processes such as

the grinding of paint pigments

passivating see AA-18 (Anodizing, Conversion Coating & Case

Hardening [through diffusion])

pH control see <u>HH-03</u> (pH Control of Process Water [including water

in of process water boilers] NOS)

photolithography see <u>AA-06</u> (Lithographic)

phosphatizing see AA-18 (Anodizing, Conversion Coating & Case

Hardening [through diffusion])

pickling (of metals) see <u>BB-04</u> (Removal by Chemical Means)

pigmentation see <u>AA-20</u> (Pigmentation/Dyeing)

polishing codes listed below under "removal of mass from

substrate," if material is removed from work piece

polishing (continued) CC-06 (Forming by Mechanical Means NOS) if material is

not removed from work piece

powder metallurgy see <u>CC-10</u> (Sintering/Powder Metallurgy)

pressure treating (wood) see <u>AA-22</u> (Impregnation/Implantation)

printing using see AA-10 (Printing Using Carrier or Filmscarrier films or

Foils)

NOTE: some mechanical "removal" processes (e.g., polishing) can be used either to remove material or to smooth the surface of a product without removing material. The code for such mechanical surface "smoothing" is <u>CC-06</u> (Forming by Mechanical Means NOS).

pulping (in paper making) see as appropriate:

BB-05 (Removal by Mechanical Means - Gross Mass

Removal)

BB-06 (Removal by Mechanical Means - Fine Mass

Removal)

BB-07 (Removal by Chemical & Mechanical Means)

punching see codes listed below under "removal of mass from

substrate"

quenching see <u>CC-05</u> (Quenching)

refrigeration see II-01 (Refrigeration)

regeneration of deionization

resins see <u>HH-01</u> (Deionization, Demineralization)

removal of mass from

substrate refers to processes which can be used to a work product,

generally, excluding the removal of dirt or grease cleaning

as in removal

The six removal codes are:

<u>BB-04</u> (Removal by Chemical Means)

<u>BB-05</u> (Removal by Mechanical Means -- Gross Mass Removal), to be used if process removes pieces or chips

<u>BB-06</u> (Removal by Mechanical Means -- Fine Mass Removal/ Size Reduction), to be used if process produces

fine particles or dust

BB-07 (Removal by Chemical & Mechanical Means)

<u>BB-08</u> (Removal by Application of Heat or Energy)

BB-09 (Drying NOS) for drying work products

repackaging see <u>GG-03</u> (Packaging/Filling)

reverse roll coating/printing see AA-03 (Knife/Spread/Roll Coating)

rinsing see BB-02 (Aqueous Cleaning of Product or Parts)

roll coating see <u>AA-03</u> (Knife/Spread/Roll Coating)

rolling see <u>CC-06</u> (Forming by Mechanical Means NOS)

rotary screen printing see <u>AA-08</u> (Screen Printing)

sand blasting see codes listed above under "removal of mass from

substrate"

sanitizing

(production equipment) see codes listed above under "cleaning of production

equipment"

saturation see AA-21 (Infiltration/Saturation)

sawing see codes listed above under "removal of mass from

substrate"

semi-aqueous cleaning see BB-01 (Solvent-Based Cleaning of Product or of work

product parts)

scouring (textile products) see codes listed above under "cleaning of work product"

screen printing see AA-08 (Screen Printing)

shearing see codes listed above under "removal of mass from

substrate"

sintering see CC-10 (Sintering/Powder Metallurgy)

soldering see CC-08 (Soldering/Brazing)

solvent-based cleaning see FF-01 (Solvent-Based Production Equipment of

production equipment Cleaning)

solvent-based cleaning see BB-01 (Solvent-Based Cleaning of Product or of work

product Parts)

solvent drying see <u>BB-09</u> (Drying NOS), for the use solvents to dry a

product or work piece

spray coating see <u>AA-02</u> (Spray Coating) (does not include electrostatic

spray coating)

see AA-04 (Electrostatic Coating Methods) for

electrostatic spray coating

spread coating see <u>AA-03</u> (Knife/Spread/Roll Coating)

sputtering see AA-19 (Deposition)

steam generation via

combustion see <u>JJ-01</u> (Production of Electricity, Steam, Facility Heat)

straightening see <u>CC-06</u> (Forming by Mechanical Means NOS)

tempering see <u>CC-04</u> (Heat Treating NOS)

trimming see codes listed above under "removal of mass from

substrate"

tumbling see as appropriate:

AA-16 (Mechanical Plating), if tumbling is used to plate

codes listed above under "removal of mass from

substrate," if tumbling is used to remove mass from a

work product, such as tumbling to deburr

<u>CC-06</u> (Forming by Mechanical Means NOS), if tumbling is used to smooth a work product without removing mass turning *see codes listed above under "removal of mass*

from substrate"

ultrasonic cleaning of parts see codes listed above under "cleaning of work product"

use of biocides see HH-02 (Treatment of Process Water: Use of in process

water/cooling towers Biocides/Disinfection)

use of squeegees/wiper

blades/rags see codes listed above under "cleaning of production

equipment"to clean production equipment

vacuum impregnation see <u>AA-22</u> (Impregnation/Implantation)

vacuum metallizing see <u>AA-19</u> (Deposition)

vapor degreasing see codes listed above under "cleaning of work product"

water deionization see <u>HH-01</u> (Deionization, Demineralization)

water chlorination see <u>HH-02</u> (Treatment of Process Water: Use of

Biocides/Disinfection

water softening see <u>HH-01</u> (Deionization, Demineralization)

welding see <u>CC-09</u> (Welding)

Appendix I

PRODUCTION UNITS

The Form S contains both facility-wide and process-specific information. Facilities report information on the quantity of chemical used and the amount generated as byproduct (waste) on a facility-wide level. Any progress in reducing byproduct through the implementation of toxics use reduction is measured and reported at the process (or "production unit") level.

A **production unit** is "a process, line, method, activity, or techniques, or a combination or series thereof, used to produce a product or a family of products."

A **product** means "a product, family of products, an intermediate product, a family of intermediate products, or a desired result or family of results."

A **result** is, for example, clean laundry after an industrial cleaning process.

A **family of products** is, for example, three different rubber compounds grouped together as one product.

Intermediate product is, for example: A chemical manufacturer produces methanol as an intermediate step in the production of formaldehyde. The methanol can be considered a product.

With these definitions TURA gives facilities flexibility in how they divide their facility into production units:

- A production unit can include all of the processes used to produce an individual item such as a particular shade of paint or a plated knife, or that produce a desired result such as cleaned out lines and mixing vats.
- Products can be grouped together into a family of products so that, for instance, all of the processes used to create several different shades of paint could be considered one production unit.
- An individual process step such as degreasing coupled with the result of that step (for example, a degreased piece of metal), can be considered a separate production unit.
- Separate process lines that make the same product can be considered as one production unit.

For guidance on factors that should be considered when establishing production units, please refer to MassDEP's "Guidelines for Classifying Production Units". This can be obtained on the MassDEP web site at

http://www.mass.gov/dep/toxics/laws/policies.htm.

In addition to identifying production units, facilities must also establish a "unit of product." There are two basic explanations for a decline in the quantity of chemical generated as byproduct: There could have been a drop in production levels, or, through the implementation of TUR, less byproduct could have been generated per unit of product produced.

In order to distinguish byproduct reductions that occur through declines in production from those that occur because of the implementation of TUR, production level reporting is done on a "per unit of product" basis.

As with production units, facilities are free to select the unit of product. The key to choosing a unit of product is that the measure should be a reliable indicator of changes in production levels. The unit of product should be one that reliably increases or decreases as production goes up or down. The Guidelines for Classifying Production Units discusses considerations for selecting a unit of product.

In most cases, an acceptable choice will be a physical measure such as pounds of ammonia manufactured by the production unit or square yards of printed fabric.

✓ Example

Example Units of Product No. of Products/year Square feet/year Pounds/year Gallons/year Units of Product No. of wood chairs square feet of anodized parts pounds of formaldehyde produced gallons of paint produced

Sometimes, however, it may not be possible to identify a physical measure that reliably reflects outputs. In such a case, a non-physical measure may be used as a way to quantify changes in production. Examples of this may include: hours of operation, labor hours, and dollar sales.

Non-physical measures can be affected by things that have nothing to do with changing levels of production. For instance, dollar sales will be influenced by changes in inflation, or perhaps, by product pricing. Labor hours might be less reliable if there has been a mid-year shift to automation, making output more efficient.

If you chose a non-physical unit of product, you must provide a written explanation as to why a physical measure cannot be used. You must also state how the non-physical measure has been adjusted to accurately reflect production levels rather than changes in costs, prices, inventory, productivity or other factors.

Appendix J

GLOSSARY OF TERMS

<u>Alloy</u>: a substance possessing metallic properties and composed of two or more elements of which at least one must be a metal. The term refers to those cases where there is an intentional addition to a metal for the purpose of improving certain properties.

Base Year: the benchmark year from which the facility will measure progress in reducing the byproducts and emissions attributable to the production unit. In each succeeding reporting year the byproducts and emissions attributable to the production unit will be compared to those in the base year, on a per unit of product basis.

<u>Byproduct</u>: all nonproduct outputs of toxic or hazardous substances generated by a production unit, prior to handling, transfer, treatment or release.

Byproduct Reduction Index (BRI): BRI = 100 x (A-B) / A

A = (Byproduct quantity in the base year) / (number of units of product produced in the base year)

B = (Byproduct quantity in the reporting year) / (number of units of product produced in the reporting year)

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act, commonly referred to as "Superfund."

Emissions Reduction Index(ERI): ERI 100 x (A-B) / A

A = (Emissions quantity in the base year) / (number of units of product produced in the base year)

B = (Emissions quantity in the reporting year) / (number of units of product produced in the reporting year)

EPCRA: Emergency Planning and Community Right to Know Act.

Facility: all buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person, or by any person who controls, is controlled by, or is under common control with such person.

<u>Full-Time Employee Equivalent</u>: An FTE is defined as 2,000 work hours per year. The 10 FTE criteria is met if a total of 20,000 hours were worked by all employees (including consultants) whether they worked full or part-time.

Note: repackaging the chemical is considered processing.

<u>Included SIC Codes</u>: This is one of the areas where TURA's requirements differ from those of EPCRA.

Under TURA, the SIC code criteria is met if any of your business activities are conducted in the areas represented by TURA's longer list of included SIC codes. The TURA list includes manufacturing plus business activities such as transportation, wholesale trade, and business or personal services.

EPCRA reporting is only required of firms that derive more than 50% of their business from **manufacturing** (SIC codes 20-39). For the descriptions of the SIC codes, see Appendix A.

Manufacture: to produce, prepare, import or compound a toxic or hazardous substance.

Note: Manufacture includes the "coincidental" manufacture of a substance during manufacturing, waste treatment or fuel combustion.

<u>Otherwise Use</u>: EPA has revised it's definition of OTHERWISE USE to mean 'any use of a toxic chemical, including a toxic chemical contained in a mixture or other trade name product or waste, that is not covered in the terms "manufacture" or "process." Othwerwise use of a toxic chemical does not include disposal, stabilization (without subsiquent distribution in commerce), or treatment for destruction unless:

- A. The toxic chemical that was disposed, stabilized, or treated for destruction was received from off-site for the purposes of further waste management; or
- B. The toxic chemical that was disposed, stabilized, or treated for destruction was manufactured as a result of waste management activities on materials received from off-site for the purposes of further waste management activities. Relabeling or redistributing of the toxic chemical where no repackaging of the toxic chemical occurs does not constitute otherwise use or processing the toxic chemical.

<u>Process</u>: the preparation of a toxic or hazardous substance, including, without limitation, a toxic substance contained in a mixture or trade name product, after its manufacture, for distribution in commerce:

- in the same form or physical state, or in a different form or physical state from that in which it was received by the toxics user preparing such substance; or
- as part of an article containing the toxic or hazardous substance.

<u>Product</u>: a product, a family of products, an intermediate product, family of intermediate products, or a desired result or a family of results. "Product" also means a byproduct that is used as a raw material without treatment.

<u>Sanitized vs. Unsanitized Reports</u>: If you make a Trade Secret claim, you must submit two versions of your report -- one that contains the Trade Secret information (**unsanitized**) and one that does not (**sanitized**). In Item g. in Section 1 of the Form S Cover Sheet, indicate whether the version of the report is sanitized or unsanitized.

Shipped in or as Product: the quantity of the chemical that leaves the facility as product.



Massachusetts Department of Environmental Protection One Winter Street Boston, MA 02108-4746

Commonwealth of Massachusetts Mitt Romney, Governor

Executive Office of Environmental Affairs Stephen R. Pritchard, Secretary

Department of Environmental Protection Robert W. Golledge Jr., Commissioner